

NEWSLETTER

FALL 2003

CORDILLERAN SECTION

GEOLOGICAL ASSOCIATION OF CANADA

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Welcome back from the Bush! With snow creeping down the mountains most explorationists are back in town—although there are persistent rumours of drill programs starting up in several areas. With the pick-up in gold prices there has been a considerable rejuvenation in the exploration community. Albeit, a rather late start for the exploration season, due to late closings for financings. The outlook is at last good for a continuance of increased exploration activity for that next couple of years. In particular, next season will start off very strong with a number of important projects in B.C. and Yukon about to bear fruit. However, the situation at the BCGS is now critical with only a skeleton crew of professionals left to service the demands of expanding exploration in B.C. one wonders if the provincial government is going to wake up to the mistake that has been made and provide adequate funding to the Survey to get the job done! Limited success of the Private-public partnership program indicates that this is not a sustainable route to go for the BCGS. The debate over the development of offshore resources in B.C. is starting to heat up. In the meantime opportunities for research into some of the geoscience issues around offshore development are now only slowly being met.

This year we are fortunate to have a number of new councillors on board. Ken Hicks has joined up as an industry representative. Jeff Boyce is the new UBC student rep. At last a Section councillor is now on GAC National council. Dr. Peter Mustard from SFU, who has been involved with the Cordilleran Section for a number of years, was elected to GAC national council at last year's GAC-MAC-SEG joint annual general meeting. The Section also has a new News Letter editor: Dr. Stuart Sutherland from UBC has volunteered to take on this task.

The Section's activities, for the upcoming year, will continue to focus largely on publications. Brown Bag discussions will meet from time to time to hear about new technologies, exploration and geological developments in the Cordillera and elsewhere. Contact us with ideas, issues or news and views that you feel the Section should be focusing on. The calendar of outside events is also packed with a number of very exciting events during the coming year. The annual Yukon Geoscience Forum is happening November 14—18 followed by the BC & Yukon Chamber of Mines Mineral Exploration Round-up January 26—29, 2004. GAC-MAC joint annual conference will be held next year in St Catherines, Ontario, May 12–14, 2004.

GAC National is launching an unprecedented campaign to attract new members and keep existing members by offering a substantial reduction in membership dues (50% and 25% respectively). But you better act quickly! The offer is only good until December 1, 2003. See the brochures on pages 7 and 8 to get full details and to learn more about the benefits of membership in Canada's premier geoscience organization.

Carl Verley





Goals

To advance the science of geology, especially concerning the Cordilleran region. To promote a better understanding of Cordilleran region geological issues among geoscientists and the general public.

Cordilleran Section — GAC 2002-2003 Council

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 Ted Danner
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Contact us by email through:
 Gilley@sfu.ca

CORDILLERAN SECTION—GAC
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 STN A BENTALL CENTRE
 VANCOUVER, B.C. V6C 2N2

WEBSITE

www.sfu.c/earth-sciences/gac/

Joint University Scotland Field Trip:

Students from UBC, SFU and UVic traveled to Scotland in August this year for 2 weeks on the first joint BC Universities Geological Field School. Students visited the classic geological sections in the "birthplace of modern geology." Many of the basic geological principles taught in our universities were developed in the Highlands and Lowlands of Scotland and as such these sections permitted a unique opportunity to place class room learning in a historical and scientific context. The trip was organized and run by Dan Marshall (SFU), Stuart Sutherland (UBC) and Lori Kennedy (UBC) and kindly supported by a donation from the GAC – CS.

Sites visited included: Hutton's Unconformity at Siccar Point; Hunterian Geological Museum in Glasgow; Arthur's Seat Volcanic complex, Edinburgh; the Geology of Loch Tay including the boundary Slide and the classic Barrovian Metamorphic zones; the Tay Nappe; the Moine Thrust and associated Cambro-Ordovician sediments; Lewisian Gneiss and the Scourie Dykes; the late Precambrian sediments around Stoer; The Great Glenn Fault; Terti-



Hutton's Unconformity at Siccar Point

ary Igneous Activity on the Isle of Skye. The weather was extremely kind and the midges (Scottish no see ems) extremely persistent. Despite the loss of blood suffered by all due to insect attack, the trip was a great success. The geology was superb and both students and faculty enjoyed the opportunity to develop closer links between our Earth Science departments. It is hoped that the trip will run again in 2006, possibly supported by a joint SFU / UBC course.

The Pacific Museum of the Earth

The Pacific Museum of the Earth was officially opened in the department of Earth and Ocean Science at UBC on the 19th of June 2003. The event was well attended by school and university educators, government and industry representatives and general enthusiasts / friends of the museum.

The Mission

The Pacific Museum of the Earth (PME) aims to showcase the diverse wonders of Planet Earth from the core to the stratosphere. It will examine the diverse nature of the oceans, atmosphere and the solid Earth. Like the museums that preceded it, the PME will continue to maintain close links with the downtown geology and minerals industry.

The PME is to be a resource for UBC, the general public and, in particular, K-12 education. As such it is hoped that close ties will be developed between the museum and BC schools.



Opening day at the PME

History

The Pacific Museum of the Earth (PME) has been created by the merger of two museums; the M.Y. Williams Geological Museum (UBC) and the Pacific Mineral Museum (PMM, downtown Vancouver).

The merger commenced on February 2nd 2003 with collections from both museums being combined to form the PME within the Department of Earth and Ocean Sciences (EOS).

Development Timeline

The space is now open, initial display cases have been put into place, and collection cataloguing has begun. In the coming months, this museum will grow according to the plans outlined below.

Phase 1

Phase 1 involves the merging of collections and setting up the displays from the former PMM. This process is almost complete but some of the old UBC material is still to be replaced / updated and a number of cabinets customised to fit the display area within EOS.

In addition to merging collections, Phase 1 will also include;

- * Creating additional displays to reflect the ocean and atmosphere components of EOS at UBC.
- * Refining displays to reflect British Columbia's K-12 curriculum in Earth Sciences.
- * Setting up the gift store in its temporary location in room 128 (now open).
- * Refurbishing and updating the Seismic Centre and reinstalling it on the main floor of the museum.

Phase 2

Phase 2 will see the gift store move to the area currently occupied by the discovery gallery and the creation of the Teachers Resource Centre. The centre will be made available to schools Monday - Friday and will contain the following resources:

- * The Discovery Gallery
- * Audio Visual equipment
- * Rock and mineral kits
- * Slide sets and text books for loan
- * Lesson plans and ideas

Phase 3

Phase 3 includes development of the courtyard in front of the main entrance and the installation of "the vault" on the main floor of the museum.

The courtyard: The final version of the courtyard development plan will contain design elements based on earth, ocean and atmosphere themes.

The Vault: The vault was an exhibit from the PMM which contained gold and precious gems. This will be reconstructed in the PME.

Virtual Components: A strong web-presence will be incorporated into all aspects of our museum, making exhibits, teaching & learning facilities, and other aspects available on-line to the public.

Contact Information

General Inquiries

E-mail: pme@eos.ubc.ca

Curator: Kirsten Parker

E-mail: kparker@eos.ubc.ca

Phone: 604-822-6992

Museum Address:

Pacific Museum of the Earth
c/o The Department of Earth and Ocean Sciences
6339 Stores Road
Vancouver V6T 1Z4
Canada

Website:

<http://www.eos.ubc.ca/public/museum/main.html>

Publications Update:

The Geology of the Canadian Cordillera is well underway. In fact a draft is anticipated this spring. This long awaited addition to the GAC's GeoText series is being co-published by the Section with GAC National.

Council is also looking at a series of photographs provided by Dr. Ted Danner that provide the basis for a "Geologic Photo Essay of the Pacific Northwest" - a draft manuscript that Ted has put together. This could work as a stand-alone coffee table-type book or the images could be used as the basis for a digital image bank of Cordilleran Geoscapes. If you are interested in donating geological images from around the Cordillera that could be used in image bank please contact us.

Peter Mustard, Danny Hora and Cindy Hansen's: *Geology Tours of Vancouver's Buildings and Monuments*, is selling well. This book was released at GAC-MAC-SEG Vancouver2003—see page 8 for details.

Field Trip guidebooks for GAC-MAC-SEG Vancouver2003 have also done well. These informative guidebooks are always popular and providing a valuable source of up to date information on various aspects of Cordilleran geology—check page 9 for further information.

Brown Bag discussion Group:

Announcements of upcoming Brown Bags talks will be emailed or faxed out to members as the program develops. If you have a project or geoscience issue that you would like to bring up or see discussed, please let know!



YUKON GEOSCIENCE FORUM

NOVEMBER 14-18, 2003
HIGH COUNTRY INN
WHITEHORSE, YUKON
www.ycmines.ca



MINERAL EXPLORATION ROUNDUP 2004

**WESTIN BAYSHORE RESORT & MARINA
VANCOUVER, CANADA
JANUARY 26 - 29, 2004**

For more information see the Roundup website at:
<http://www.bc-mining-house.com/rdup2004/roundupoverview.htm>

SUMMER STUDENTS

Are you intending to hire students to work as junior or senior geological assistants for the upcoming summer? Whether in mineral exploration, environmental geoscience or any other "earth science" discipline, in the office or in the field, there are competent, intelligent and keen undergraduate students who are seeking experience in your area of interest. Please send your ads to all of the following departments so that they can be posted for the students to respond to.

Earth Sciences - Simon Fraser University
8888 University Drive
Burnaby, B.C. phone: (604) 291-5387
V5A 1S6 fax: (604) 291-4198

Earth & Ocean Sciences - University of British Columbia
6339 Stores Road
Vancouver, B.C. phone (604) 822-2449
V6T 1Z4 fax (604) 822-6088

Earth and Ocean Sciences - University of Victoria
P.O. Box 3055
Victoria, B.C. phone (250) 721-6120
V8W 3P6 fax (250) 721-2000

GAC National Awards

GAC annually honors geoscientists in a number of areas. Awards are presented at the spring meeting, but now is the time to start looking around for appropriate candidates who should be nominated for some of these tributes. If you have a person in mind who you feel would be a candidate for an award, please file a nomination or contact us regarding the nominating process.

Check the GAC website for award details:
(www.gac.ca)

The Logan Medal

The Logan Medal is the highest award bestowed by the Geological Association of Canada. It is awarded to an individual who has made outstanding contributions to geoscientific knowledge in Canada.

Past Presidents' Medal

The Past Presidents' Medal of the Geological Association of Canada is awarded to a geoscientist who during the first decade or so of her/his career is judged to have made an outstanding accomplishment in research, development, or applications in their particular field. The recipient shall be expected to undertake a lecture tour in Canada, visiting major centres, at the expense of the Association.

J. Willis Ambrose Medal

The Ambrose Medal of the Geological Association of Canada is awarded to an individual who has rendered sustained distinguished service to the earth sciences in Canada, through outstanding accomplishments in one or more of the following realms: education; research; management; and administration; promotion; and institutional, professional or society affairs. This medal is awarded annually unless no suitable candidate is identified.

The E.R. Ward Neale Medal

The E. R. Ward Neale Medal of the Geological Association of Canada is awarded to an individual who has made, or is making, significant contributions to the public awareness of geoscience. The award recognizes outstanding efforts to communicate and explain geoscience to the public through one or more of the following vehicles: public lectures, print or electronic media articles, school visits, elementary and secondary school educational materials, field trips, science fairs, and other public communications. The medal will be awarded annually unless no suitable candidate is nominated. *Continued on page 6.*

Distinguished Fellows

The honor of Distinguished Fellow is intended for the Fellows of the Association who fit any or all of the following categories:

1. significant contributions to geoscientific knowledge in terms of research, development or applications of geosciences;
2. significant contributions to geoscience education;
3. significant contributions to institutional, professional or society affairs in terms of administration, management and/or promotion of geosciences.

GAC Service Awards

The Geological Association of Canada is a volunteer organization. In recognition of the outstanding contribution of its volunteers, the Association has instituted a series of service awards to be given out as significant contributions are made. The series includes: Honorary Life Members Award, 50-Year Members Award, the Distinguished Service Award and the Volunteer Award.

Honorary Life Members Award

The GAC has established a series of service awards to recognize outstanding volunteer efforts: Honorary Life Membership. This is the highest award, made to an individual who has contributed long-term distinguished service to the Geological Association of Canada. There is no age limit. Recommendations of persons for honorary membership may be made at any time to the Council. The recipient shall not be required to pay dues. The award will include a framed certificate and a GAC publication of the recipient's choice.

Distinguished Service Award

This award is made to those people who have made an outstanding contribution to the GAC through volunteer work. There is no limit to the number of awards that can be given, but this is an award of distinction and should be given only for specific exemplary service. The award will consist of a plaque bearing the GAC logo, the name of the winner and the particular contribution being recognized.

Volunteer Award

The objective of this award is to recognize those members and non-members who have made a significant singular contribution through voluntary service to the Association. There is no limit to the number of awards that can be given. The award will consist of an unframed certificate of achievement

OTHER OUTSIDE EVENTS:**2003**

- October 23: CCRA & BCYCM: Flow-through Shares Financing Workshop
- October 29: **MEG:** Aviat Diamond Project, Hyatt Regency
- October 30: **UBC Colloquia** 12:30 pm, Rm 330-A EOS main building John Mavrogenes, Australian National University, Molten Ore: What a Mess!
- November 2—5: **GSA annual meeting**, Seattle Washington, www.geosociety.org/meetings/
- November 12: **MEG TBA**
- November 14—18: Yukon Geoscience Forum: High Country Inn, Whitehorse**
<http://www.ycmine.ca>
- November 21: **UBC Colloquia** 12:00 pm, Rm 330-A EOS main building, Dr. Ashton Embry, GSC Calgary, The Canadian Society of Petroleum Geologists Speaker Series: Common Sense Sequence Stratigraphy
- November 26: **MEG TBA**
- December 2-6: Northwest Miners Association Annual Meeting:
www.nwma.org/pdf/brochure.pdf
- December 9: **MEG** Short Course

2004

- January 8: **MEG** tba Placer Dome Pueblo Viejo
- January 24: **MEG**
- January 26 - 29: **Mineral Exploration Roundup**
roundup2004@chamberofmines.bc.ca
- March 7— 10: **Prospectors and Developers Annual Conference: Toronto**
- May 12—14: **GAC-MAC Joint Annual Conference:**
Brock University, St. Catherines, Ontario,
www.stcatherines2004.ca

From page 5:

As mentioned in the last Newsletter, Dr. Stuart Sutherland has organized Mary Lou Bevier's nomination for the E. Ward Neale award. As you may be aware, apart from her regular teaching activities at UBC, Mary Lou has been very active in outreach work including volunteering with Scientists and Innovators in Schools teaching geoscience to First Nations, and lecturing K-12 teachers about geoscience through Science World's Loon Lake Science program. Mary Lou also acts as a resource person for public awareness of geoscience issues. GAC National has informed us that this nomination will be kept on file for 2 more years and brought up at the next meeting of the awards committee. Letters of support for this nomination would be appreciated and should be forwarded either to:

Dr. Stuart Sutherland
Department of Earth and Ocean Sciences
The University of British Columbia
6339 Stores Road, Vancouver, BC, V6T 1Z4
Fax: 604-822-6088
Email: ssutherland@eos.ubc.ca

Or:

Scott Swinden,
Nova Scotia Dept. of Natural Resources,
P.O. Box 698,
Halifax, NS B3J 2T9;
Tel: (902) 424-7943; FAX: (902) 424-7735
Email: hsswinde@gov.ns.ca





Discounts on Memberships

50% Off - *New and Reinstating* Members
(Not paid for 2003)

25% Off - *Renewing* Members (Paid for 2003)



The *Geological Association of Canada* (GAC) is Canada's most broadly based geoscience society. Members receive 4 issues of *Geoscience Canada*, our flagship quarterly journal, PLUS 4 issues of our provocative & timely quarterly newsmagazine *Geolog* each year. Members also receive generous discounts on books and conference registration. With savings like this, it's almost like a free membership!

Join, reinstate or renew your membership for 2004 at:

www.gac.ca/MEMBERSHIP/membership.htm



We have a special **limited-time offer** on 2004 memberships that is only available until **December 1, 2003!**

- \$60.00 • ~~\$120.00~~ plus tax for new and reinstating members
- \$45.00 • ~~\$90.00~~ plus tax for new retired and unemployed members
- \$40.00 • ~~\$120.00~~ plus tax for renewal of 2003 membership
- \$67.50 • ~~\$90.00~~ plus tax for renewal of 2003 retired and unemployed membership

Existing special rates & discounts for students, corporate members and spousal members continue to apply.

With an offer this good, you may want to ensure that your co-workers take advantage too. Be sure to let them know!

Thank you for your continued support of GAC

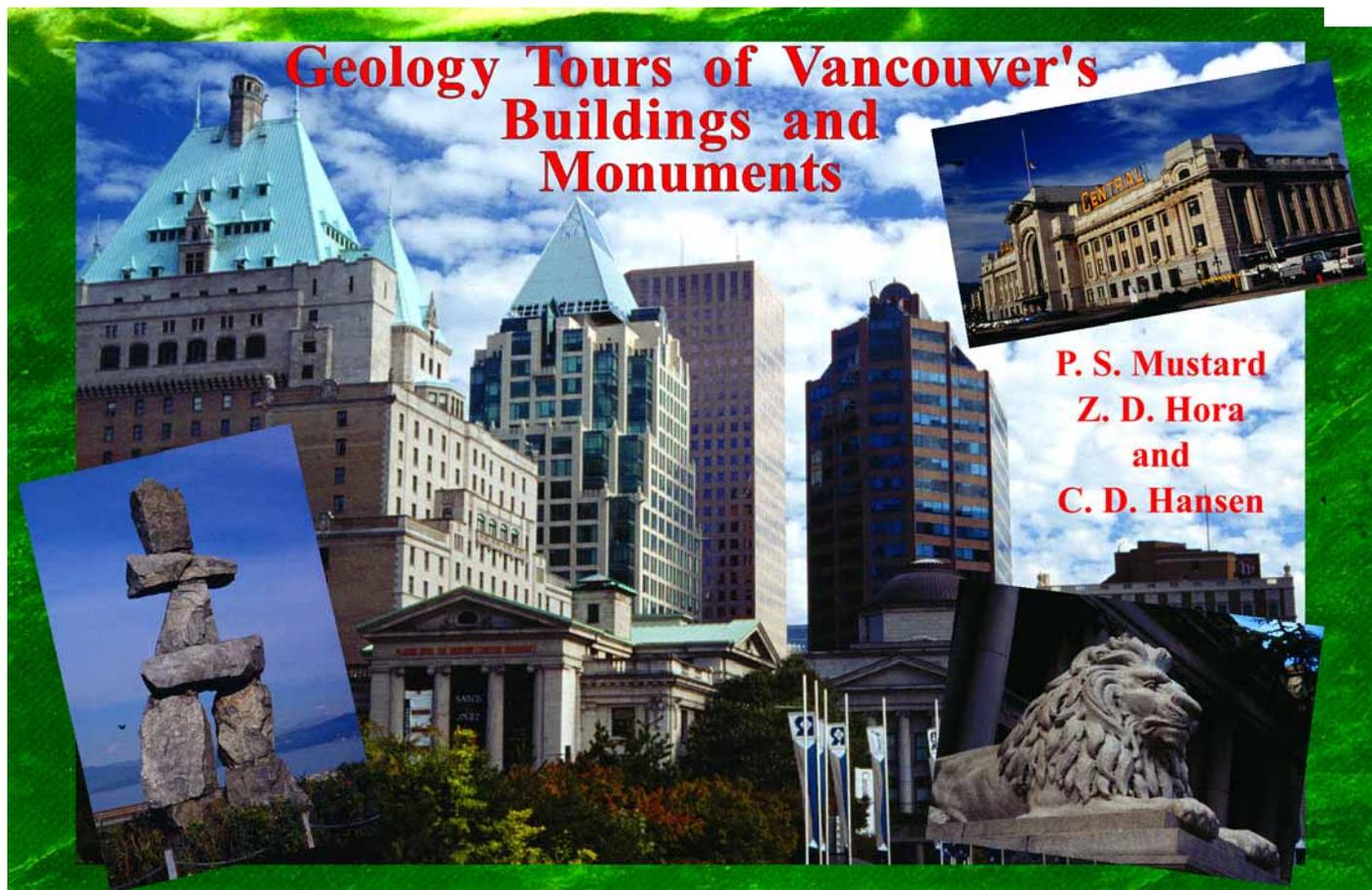
Canada's premiere geoscience society
Serving geoscientists since 1947



Benefits of Membership

- ✓ Subscription to *Geoscience Canada*, GAC's Flagship Journal (**\$85 Value**)
- ✓ Subscription to *Geolog*, GAC's informative, provocative and entertaining newsmagazine (**\$35 Value**)
- ✓ Generous Discount on GAC publications
- ✓ Save **\$188** on *Canadian Journal of Earth Sciences* subscription
- ✓ Save **\$106** on *Canadian Geotechnical Journal* subscription
- ✓ Reduced registration fee at GAC-MAC annual meetings
- ✓ Networking opportunities with 12 Specialist Divisions and 5 Regional Sections
- ✓ Networking opportunities with leading experts around the world - GAC has more than 2300 members in 17 countries
- ✓ Publishing opportunity with GAC's own professional publishing house
- ✓ Opportunity to participate in GAC's national term-life and family insurance plan at Association rates. Disability, critical illness and health and dental benefits are also available
- ✓ Opportunity to subscribe to GAC's email list - a vehicle to discuss topical issues and exchange of information
- ✓ Fellows are granted voting privileges and have the opportunity to choose their representation in GAC at the annual general meeting
- ✓ Website resources at **www.gac.ca**
- ✓ Opportunity to serve your profession through volunteer participation with the national body
- ✓ Become more involved in celebrating Canada's most prestigious geoscience awards

Canada's premiere geoscience society
Serving geoscientists since 1947



Geology Tours of Vancouver's Buildings and Monuments

**P. S. Mustard
Z. D. Hora
and
C. D. Hansen**

New GAC and GAC Cordilleran Section Publication

Available for the 1st time at the GAC-MAC-SEG Conference

Geology Tours of Vancouver's Buildings and Monuments

By: P.S. Mustard, Z.D. Hora and C.D. Hansen

This book provides walking, bicycle or driving tours within the cities of Vancouver, West Vancouver and North Vancouver. The book is a "popular science" treatment of the rock types (commonly called dimension stone) used as building material for the major buildings and monuments of the Vancouver area. This includes information on general rock names, fossils, minerals and other interesting geologic features of Vancouver's major buildings. The tours are arranged in a logical order, allowing the reader to guide themselves on any of three downtown Vancouver walking or bicycle tours, or bicycle, public transit, or driving tours of both the South Vancouver area and North and West Vancouver areas. Sixty-five buildings and monuments are included, ranging from Vancouver's earliest major buildings (Sun Tower, Carnegie Hall, etc.) to some of the most recent (Cathedral Place, Terminal City Club, etc.). The main intent is to document the geologic aspects of the dimension stone used, however discussion of the building history of use and changes in both types of dimension stone favoured and architectural styles also provides a unique way of tracing the historical development of Vancouver and large building construction techniques during the last 110 years.

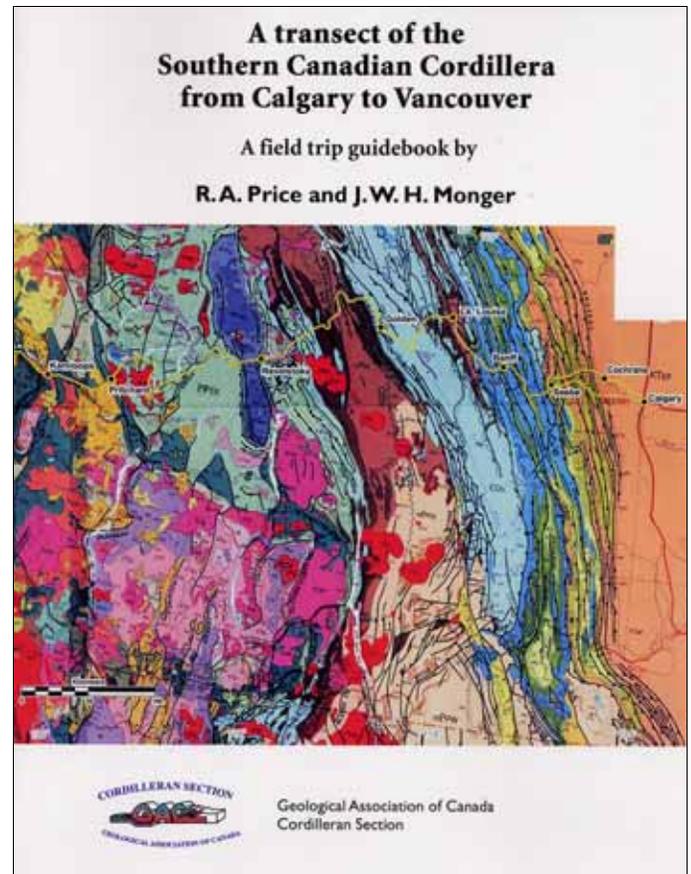
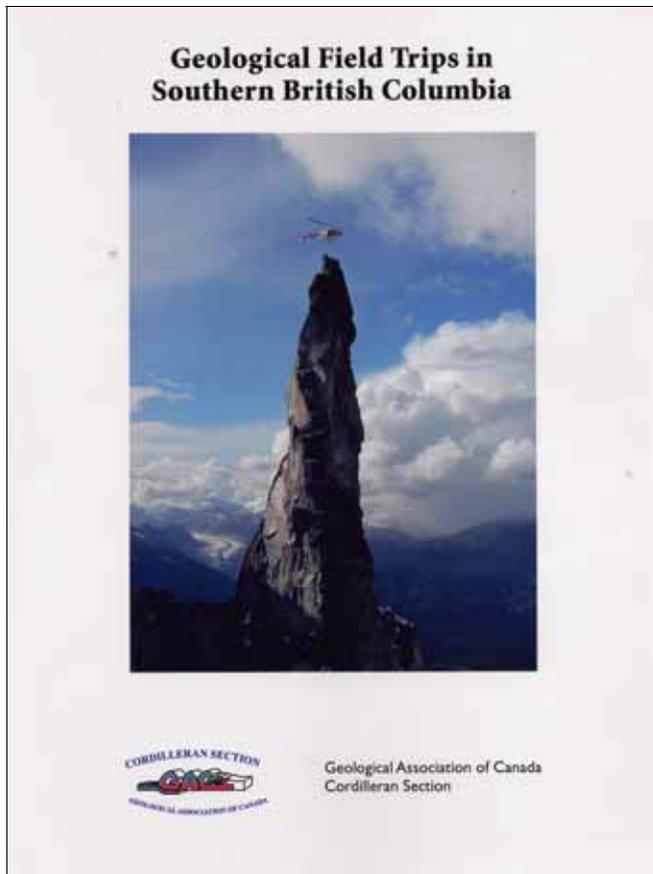
The book includes an introductory chapter summarizing the geological evolution of the local region, a brief introduction to the major rock types commonly used for building stone, a synopsis of the historical evolution of the B.C. rock quarry industry, and also a short primer on dimension stone in general, summarizing briefly the variety of types, finishes, and features of the most common dimension stones, especially those used in the Vancouver area. The tours are keyed to simplified street maps, clearly showing recommended routes and keying buildings to the relevant pages of information on each. A glossary of geological, architectural, and dimension stone terms is provided at the end of the book, along with a list of suggested reading and an index of buildings included in the book.

ONLY \$20 !!

Available from the GAC website (www.gac.ca) or at the GSC Bookstore in Vancouver

NEW

Cordilleran Section Field Guides



This very well illustrated guide book contains 6 field trip guides that provide up to date information on a number of important aspects of B.C.'s geology:

1. Cordilleran ore deposits (Hoy & Lefebure)
2. Massive sulphide deposits at Myra falls (Chong et al)
3. Sedimentology, paleontology, ichnology and sequence stratigraphy of the Upper Cret. Nanaimo Grp. (Mustard et al)
4. Quaternary glaciovolcanism along the Whistler Corridor (Kelman, Hickson & Russell)
5. 2360 B.P. eruption of Mount Meager (Russell et al)
6. Critical earth science issues along transportation corridors in SW B.C. (Clague & Turner)

A revision of the guide book produced for GSA 2000, this edition arrived just in time to fill orders for the previously sold out version. It is totally updated version of the ultimate guide to the southern Cordillera, by the two "world-class" experts on Cordilleran tectonics and evolution. Dense with figures and comprehensive references, this is an invaluable resource for any geologist working in the Canadian Cordillera.

Purchase either publication at the GSC Bookstore in Vancouver or over the web at GAC National (www.gac.ca) or alternatively download an order form from the Section's website:

www.sfu.c/earth-sciences/gac/

The Cordilleran Section of the GAC was established over 30 years ago in an effort to bring geologists in the Vancouver and lower mainland area together to discuss and debate topical issues. As the group evolved and more geologists settled in the lower mainland the range of events grew from small discussion groups to workshops and short courses as well as symposia.

Objectives

To advance the science of geology, especially concerning the Cordilleran region. To promote a better understanding of Cordilleran region geological issues among geoscientists and the general public.

Activities:

Workshops: From time to time the Section puts on workshops in the winter or spring – watch our newsletter for upcoming workshops. In the recent past, topics have included:

- 1 **Diamonds: Theory & Exploration**
- 2 **Cordilleran Tectonics and Mineral Deposits**
- 3 **Yukon-Tanana**
- 4 **Nechako Geology**
- 5 **Introductory Geospanish**
- 6 **Internet for Geoscientists**
- 7 **Mining the Internet**
- 8 **Quality Control Strategies In The Estimation And Classification Of Mineral Inventories**

Publications: The Section sells GAC publications relevant to Cordilleran Members at local conferences. The Section also produces its own publications, including the popular *Vancouver Geology*. Latest publications include: *Geology Tours of Vancouver's Buildings and Monuments* and two sets of field trip guidebooks produced for the May 2003 GAC-MAC-SEC meeting held in Vancouver: *A transect of the southern Canadian Cordillera: Vancouver to Calgary* and *Geological Field Trips in Southern British Columbia*. A number of exciting, new publications are in the works, including: *Geology of the Canadian Cordillera*.

Student Members receive discounts on our books, workshops and other activities. Grants are available to qualifying student groups for conferences, formal field trips, and other activities.

JOIN US! ~ ~ ~ ~ Dues Structure for 2004 ~ ~ ~ ~

Mail completed form, with cheque for annual membership dues of \$10 (GST included) payable to *Cordilleran Section – GAC*, to: **P.O. Box 398, Station A Bentall Centre, Vancouver B.C., Canada V6C 2N2**

___ *Renewal* ___ *New member*

Name: _____ Company/Affiliation: _____

Street: _____ City: _____ Province: _____

Postal/Zip: _____ E-Mail: _____

Tel. Office: (_____) _____ Home: (_____) _____ FAX: (_____) _____

Website: <http://www.sfu.ca/earth-sciences/gac/>