



Cold Trail

Newsletter of the Cryosphere Specialty Group

Association of American Geographers

New Series

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F. E. Nelson, Editor

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Editorial: AAG and the Cryosphere

Welcome to the first issue of *Cold Trail*, the newsletter of the Association of American Geographers' Cryosphere Specialty Group (AAG/CrSG). Although our group has existed formally for nearly eight years and previous officers have communicated with the membership via e-mail, we haven't had a regularly issued medium dedicated to news from, about, and for our membership. This newsletter attempts to fill that void. The name *Cold Trail* was suggested by Jeff Norris, a recent graduate of the University of Colorado at Colorado Springs. The term "trail" is appropriate: as an unpublished manuscript by Mr.

Consortium of the United States (ARCUS), the International Permafrost Association (IPA), and many other possible candidates.

- Should we establish an awards program for outstanding papers, careers, or student contributions?
- Given the group's "synthetic" nature, should we try to schedule a larger proportion of our paper and poster sessions jointly with other AAG specialty groups?
- Should we establish (possibly with another group) a tradition of holding an excursion of some type at national meetings?
- Should we make a concerted effort to represent CrSG at the various AAG **regional** meetings?

I hope that we can discuss these and other issues arising from the membership at our business meeting at 7PM on Tuesday, March 16 in Room 414 of the Marriott.

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Our specialty group is a relatively small one, with a current membership of well under 100. Although we should be able to increase our numbers by recruiting graduate students and more cryosphere types who haven't yet joined, it's likely that we'll continue to be one of the smaller AAG specialty groups. Obviously, there's strength in numbers--one way to extend our intellectual horizons and our influence is to develop a tradition of working cooperatively with other specialty groups and with organizations outside the AAG. This year's "Celebrating a Century of Physical Geography" (CCPG) sessions provide a good start at this. Co-sponsored by the Cryosphere, Geomorphology, Climate, Water Resources, and Biogeography Specialty Groups, CCPG consists of seven sessions involving 35 papers and 60 authors. These sessions have caught the attention of the AAG's central office and the American Geographical Society, each of which is providing some prominent advertising. We've also received financial support from Bellwether Press to hold an open reception marking the sessions. Let's make cooperative efforts like this a tradition!

A Bit of History: The American Geographical Society was very active in sponsoring polar expeditions in the nineteenth century. Perusal of the old *Bulletin of the American Geographical Society* (the precursor to *Geographical Review*) or J.K. Wright's *Geography in the Making* shows that early North American geographers were very active in pursuing cryospheric research. Several papers on cryospheric topics were presented at the first meeting of the AAG in 1904.

Working in the often isolated confines of our departments and institutes, it's possible to think of cryosphere studies as a fairly peripheral area of geography. Certainly, many people in other areas of the discipline consider it so. The "cold trail" is, however, extremely prominent in the history of our discipline and organization. This is true to such

an extent that several of our members have decided to undertake a review paper on the topic, possibly for publication in the *Annals*. In a future edition of this newsletter I'll be asking you to contribute bits of information and lore to this effort.

CrSG was created, in part, to relieve that sense of isolation in the "home departments." Organizational groundwork for the Cryosphere Specialty group was carried out in 1995-96 by H. Jesse Walker (Louisiana State University), assisted by several other geographers. The first dedicated Cryosphere sessions at an AAG national meeting took place in Charlotte in 1996. At that meeting Cryosphere was identified as an "Interest Group," and the sessions were co-sponsored by other AAG specialty groups. The Cryosphere Group was formally established in 1997 and elected its first officers at the Fort Worth meetings that year.

One fascinating example of the cryosphere's centrality in the AAG is that no fewer than 21 AAG Presidents and Honorary Presidents studied cryospheric topics throughout or during some period of their careers. This fact will form a prominent part the CrSG's poster in the "AAG Hall of History" at the Philadelphia meeting. The list includes William Morris Davis (1905 and 1909), Cyrus Cornelius Adams (1906), Grove Karl Gilbert (1908) Ralph Stockman Tarr (1911), Henry G. Bryant (1913), Lawrence Martin (1929), Isaiah Bowman (1931), Francois E. Matthes (1933), Wallace W. Atwood (1934), William Herbert Hobbs (1936), W.L.G. Joerg (1937), J. Russell Smith (1942), Charles F. Brooks (1947), George B. Cressey (Honorary President, 1957), Paul A. Siple (1959), C. Warren Thornthwaite (Honorary President, 1961), F. Kenneth Hare (Honorary President, 1964), J. Ross Mackay (1969), Melvin G. Marcus (1977), John R. Mather (1991), and William L. Graf (1998).

We look forward to your ideas at this year's business meeting. See you in Philly!

Fritz Nelson

Treasurer's Report

Hengchun Ye, California State University, Los Angeles

CrSG has transferred its funds to an account managed by the AAG's Central Office. The transfer was completed in February 2004. The total amount in the account as of February 15, 2004 is \$1496.75. This sum includes the 2003 deposit from AAG.

Current commitments are:

Expenses of keynote speaker

at Centennial Meeting: \$500.00

Contribution to CCPG reception: \$250.00

Inherited debt

(amount represents full payment): \$450.00

Total expenditures: \$1200.00

Recent donation: \$250.00

Funds remaining after expenditures and donations: \$ 546.75

Our current dues structure and membership generate only about \$150/yr, which is insufficient to continue support for speakers, field trips, and other desirable activities. The membership and fund-raising drives described elsewhere in this newsletter are critical to the financial health of CrSG and the level of activities it can support. Please contribute what you can to CrSG. Both small and large contributions are welcome!

Make checks out to AAG, and note that the contribution is for the Cryosphere Specialty Group and send to:

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Recruitment and Fund Raising

Elsewhere in this issue the point was made that the cryosphere is an area of study derived from many components. As a consequence, most of us have a strong allegiance to at least one other specialty group (e.g., Geomorphology, Climate, Biogeography, etc.). As presently constituted, people with interests in snow and climate are particularly well represented in CrSG (kudos to these folks!). We need more members active in other areas, too; periglacial and glacial geomorphology, cold-regions hydrology, biogeography, and sea ice are examples.

Although our numbers have grown appreciably since CrSG was founded, we also need more members to further our goals inside and possibly outside the AAG. Accordingly, CrSG has launched a membership drive to increase the size of its membership. To date, this has consisted of (a) making announcements about our sessions on e-mail server lists and the newsletters of other organizations; (b) making presentations about AAG/CrSG at the meetings of other organizations; and (c) directly contacting AAG members with interests in cold-regions topics who are not currently CrSG members.

Nonetheless, the number of established professional geographers with interests in the cryosphere is finite. To increase our numbers significantly we need involvement by more AAG members, particularly graduate students. **Please encourage your students to**

join CrSG (membership is free for them), to attend our sessions and business meetings, and to become involved in our activities.

Implicit in the Treasurer's Report is the fact that our revenue is tightly constrained by our low dues structure and the small size of our membership. The relatively large size of CrSG's account prior to this year's expenditures is a consequence of the fact that we didn't actually spend anything prior to this year! The \$1200 expenditure this year supports some significant activities: a keynote speaker (Hugh French) in the CCPG sessions and our contribution to the CCPG reception.

As noted elsewhere in this newsletter, we may want to establish a tradition of CrSG support for activities at the annual AAG meeting. Possibilities include financial support and/or awards for graduate students; a field trip to locations or institutes of interest to the group; an annual social event; support for outside speakers; and just building up a "war chest" for future opportunities.

Please consider contributing to CrSG's treasury. Contributions are tax-deductable. As Hengchun notes in the Treasurer's Report, both small and large contributions are welcome.

CrSG Activities at the Philadelphia Meeting

1. Business Meeting: Tuesday, March 16 in Room 414 of the Marriott at 7:00 PM. **Please plan to attend!** Two Board Members will be elected (see *Call for Nominations*, elsewhere in this newsletter) and several other important issues will be discussed or decided. **Participation by the membership is important to the health of the Specialty Group!**

2. AAG Hall of History: A special exhibit, consisting of posters featuring the history of individuals, departments, and specialty groups, will be shown at the Centennial Meeting. CrSG has assembled a poster on the history of cryospheric research in American geography. The poster, will be on display throughout the meeting.

3. CrSG Sessions: *The Cryosphere in the 21st Century*

Organized by Allan Frei, Hunter College, CUNY, assisted by Mike Palecki

Cryosphere 1: *Regional [and global](#) snow [cover](#) variations*

Organizers: Allan [Frei](#), Mike [Palecki](#)

Chair: Allan [Frei](#)

Wednesday, March 17, 8:00-9:40

1. Palecki, Mike, Snow Droughts in the Midwest

2. Mote, Philip, Variability and trends in mountain snowpack in western north America
3. Rick Forster, Observation of Snowmelt Progression in Northern Alaska with Spaceborne Active Microwave"
4. Robinson, David A. Satellite-derived Climate Data Record of Snow Cover into the 21st Century
5. Albert, Todd, Christian Georges, Anton Seimon, Late 20th century fluctuations in ice area of the tropical Quelccaya Ice Cap

Cryosphere 2: *Snow and climate processes*

Organizers: Allan [Frei](#), Mike [Palecki](#)

Chair: Mike [Palecki](#)

Wednesday, March 17, 10:00-11:40

1. Michael Walegur, Soil Temperatures in the Appalachian Highlands of the eastern United States
2. Dyer, Jamie L. and Thomas L. Mote, The Influence of Snow Depth on Surface Air Temperatures
3. Leathers, Dan, Snow Cover Ablation in the Appalachian Mountains: A Microclimatic Study
4. Mark, Bryan G., Harrison, S. P., Spessa, A., and New, M., Snowline changes at the LGM: a global synthesis and evaluation

Cryosphere 3: *Cryospheric Variability*

Organizers: Allan [Frei](#), Mike [Palecki](#)

Chair: Jamie [Dyer](#)

Wednesday, March 17, 1:00-2:40

1. Hinkel, Ken, Wendy R. Eisner, James G. Bockheim, Frederick. E. Nelson, Kim M. Peterson, Age, spatial extent, and carbon stocks of drained thaw lake basins, Barrow Peninsula, Alaska
2. Oliphant, Andrew, Richard Hindmarsh and Wendy Lawson, Energy and mass fluxes over ice-cored moraine in the Taylor Valley, Antarctica

3. Lemcke, Mary, Tracy DeLiberty, Cathleen Geiger, Mike Van Woert, Anthony Worby, Stephen Ackley, A seasonal and interannual investigation of the sea-ice thickness distribution in the Ross Sea
4. Marilyn Raphael, The influence of zonal wave three in the southern hemisphere atmospheric circulation on Antarctic sea ice concentration
5. David H. Bromwich, Jason E. Box, and Le-Sheng Bai, Greenland ice sheet surface mass balance for 1991-2000 from atmospheric modeling and observations

4. Celebrating a Century of Physical Geography

The following is a verbatim copy of announcement that has run in several places, updated to show times and locations. Plan to attend the open reception in Room 407 of the Marriott on Wednesday, March 17 at 7:30 PM! CrSG is a major player in this series of sessions.

A series of historically focused paper sessions at the Centennial Meeting of the Association of American Geographers, March 14-19, 2004, Philadelphia, PA

The Centennial Meeting of the Association of American Geographers provides an unprecedented opportunity to take stock of geography's accomplishments and the people involved in them. To mark the occasion of the Philadelphia meeting, the AAG's Geomorphology, Cryosphere, Climate, Water Resources, and Biogeography Specialty Groups have developed a series of sessions devoted to the history of physical geography. The American Geographical Society and the AAG Archives and Association History Committee are supporting the sessions.

Organized by Dorothy Sack (Ohio University; sack@ohio.edu) and Frederick E. Nelson (University of Delaware; fnelson@udel.edu), ***Celebrating a Century of Physical Geography*** (CCPG) consists of seven sessions containing 35 papers concerned with geomorphology, human-environment interactions, permafrost, glaciology, climatology, and the roles of individuals and paradigms in several subdisciplines. A pair of sessions organized by David Legates and Cort Willmott will focus on the contributions of a recent AAG President, the late John R. Mather.

Among session highlights are talks by Hugh French (University of Ottawa), Antony Orme (UCLA), H. Jesse Walker (Louisiana State University), Ellen Mosley-Thompson (Ohio State University), Mary Lynne Bird (American Geographical Society), John Schroder (University of Nebraska), Jerry Brown (International Permafrost Association), and Cort Willmott (University of Delaware).

Many of the papers will be published as a special collection in 2004 issues of the journal *Physical Geography* under the guest editorship of Dorothy Sack.

A reception marking the event will be held in the Marriot Hotel at 7:30 PM on March 17. Sponsored by Bellwether Press and the AAG Specialty Groups involved in the CCPG effort, the reception will feature informal presentations [about](#) physical geographers and their contributions over the past century.

Session and presentation titles appear below. Detailed information about the sessions and individual presentations is available in the AAG's Conference Schedule.

Sessions organized under the theme *Celebrating a Century of Physical Geography* for the Centennial Meeting of the Association of American Geographers, March 14-19, 2004, Philadelphia, PA

A. Celebrating a Century of Physical Geography: History of Geomorphology I

Sponsor: Geomorphology Specialty Group

Session Organizer: Dorothy Sack

Session Chair: Dorothy Sack

Tuesday, March 16, 1:00-2:40

1. Antony Orme, *American geomorphology in 1904*
2. Viva Nordberg and A. Turkington, *The role of geography's paradigms in weathering geomorphology*
3. John Shroder and Lubica Cverckova, *Historical developments in the classification of mass movement*
4. Vatche Tchakerian, *A century of North American desert geomorphology*
5. Tao Tang, *Spatial modeling of erosion processes on the drainage basin scale: Classic Davisian model revisited*

B. Celebrating a Century of Physical Geography: History of Geomorphology II

Sponsors: Geomorphology Specialty Group and Cryosphere Specialty Group

Session Organizer: Dorothy Sack

Session Chair: Antony Orme

Tuesday, March 16, 3:00-4:40

1. Duane Griffin, *Hollow and habitable within: Symmes' hollow earth theory and polar exploration*
2. Dorothy Freidel, *125 years of geomorphological and climatological study of Pleistocene lakes in the northwestern Great Basin*
3. Carol Harden, *Fluvial system response to land use change in the southern Appalachians: A century of investigation*
4. Dorothy Sack, *Experiences and viewpoints of mid-20th century women geomorphologists*

C. Celebrating a Century of Physical Geography: Reflections on the Past, Present, and Future

Sponsors: Climate Specialty Group, Biogeography Specialty Group, and Geomorphology Specialty Group

Session Organizers: Dorothy Sack and Andrew Comrie

Session Chair: Michael Craghan

Thursday, March 18, 1:00-2:40

1. Katrina Moser, *Paleobiogeography and the frontiers of paleolimnology*
2. Mark Blumler, *Problems with the biome concept*
3. Kent McGregor, Huntington and Lovelock: *Climatic determinism then and now*
4. Jimmy Adegoke, *Investigating climate-biosphere processes and feedbacks through the integration of fine resolution satellite land surface data into mesoscale climate models*
5. Michael Craghan, *Studying human action in physical geography: Past, present, future*

D. Celebrating a Century of Physical Geography: Permafrost and Periglacial Geomorphology

Sponsors: Cryosphere Specialty Group, Geomorphology Specialty Group, and Climate Specialty Group

Session Organizer: Frederick E. Nelson

Session Chairs: Frederick E. Nelson and Nikolay I. Shiklomanov

Thursday, March 18, 10:00-11:40

1. Hugh M. French, *Periglacial geomorphology as a branch of geocryology*
2. Samuel Etienne, *Periglacial philosophies: A century of French research in geomorphology of cold environments under the scope of Imre Lakatos' methodology of scientific research programmes*
3. H. Jesse Walker, *Research on Arctic deltas during the 20th century*
4. Jerry Brown, *Permafrost in a changing world: New opportunities and challenges*
5. Nikolay Shiklomanov, *From exploration to systematic investigations: Development of geocryology in 19th- and early 20th-century Russia*

E. Celebrating a Century of Physical Geography: Glaciology and Glacial Geomorphology

Sponsors: Cryosphere Specialty Group, Geomorphology Specialty Group, and Climate Specialty Group

Session Organizer: Frederick E. Nelson

Session Chairs: Frederick E. Nelson and Andrew G. Fountain

Thursday, March 18, 8:00-9:40

1. Ellen Mosley-Thompson, *Unique insights to the earth's climate history preserved in its cryosphere*
2. Andrew G. Fountain, David Percy, and Frank Granshaw, *Geography of glaciers in the American West*
3. Jason E. Box and Russell Huff, *Greenland Ice Sheet Scientific Exploration 1878-2003*
4. Andrew G. Klein, Mahlon C. Kennicutt II, Gary A. Wolff, Steve T. Sweet, Tiffany Bloxom, and Dianna A. Gielstra, *An environmental perspective on the historical growth of McMurdo Station, Antarctica*
5. Jon Harbor, *Glacial U-shaped valleys--A century of research*

F. Celebrating a Century of Physical Geography: John R. Mather and His Legacy I

Sponsors: Climate Specialty Group, Water Resources Specialty Group, Cryosphere Specialty Group, and Geomorphology Specialty Group

Organizers: David R. Legates and Cort J. Willmott

Chair: Cort J. Willmott

Friday, March 19, 8:00-9:40

1. David R. Legates, *John R. Mather: A pioneer in the early use of weather radar*
2. Richard T. Field, *John R. (Russ) Mather at C.W. Thornthwaite Associates*
3. Johannes Jan Feddema, *A revised Thornthwaite type global climate classification*
4. Thomas Mather, [Michael J Brewer](#), [Sarah E Rodgers](#), and [Peter J Gogol](#), *Climate variation and health: Applying climatic water budget analyses to tick-borne disease research*
5. Harry Lins, *Rundown on runoff: Time trends from a hydroclimatic perspective*
6. Michael Brewer, *Advances in drought measurement and triggers*

G. Celebrating a Century of Physical Geography: John R. Mather and His Legacy II

Sponsors: Climate Specialty Group, Water Resources Specialty Group, Cryosphere Specialty Group, Geomorphology Specialty Group

Organizers: David R. Legates and Cort J. Willmott

Chair: David R. Legates

Friday, March 19, 10:00-11:40

1. Cort J. Willmott, *The climatic water budget and the in-service education of a "young Turk"*
2. Jay Hodny, *Dr. John R. Mather, the climate water budget and one student's experience*
3. William Rense, *A tribute to Russ Mather*
4. Mary Lynne Bird, *John (Russ) Mather and the American Geographical Society*
5. Sandra Mather, *John "Russ" Mather: His life and legacy"*

Discussion to follow Paper 5

5. CCPG Reception: An open reception to mark the CCPG effort will be held on Wednesday, March 17, at 7:30 in Room 407 of the Marriott.

6. Blackwell Geomorphology and Society Lecture, Wednesday, March 17 at 11:40 AM

“Cold Comfort: Impacts of Climate Warming in the Permafrost Regions”

News Items

- ***Geography in America:*** Cort Willmott just showed me a hot-off-the-press copy of his new book *Geography in America at the Dawn of the 21st Century* (co-edited with Gary Gaile). Contained in the book is a very nice synopsis of cryospheric science and an outline of CrSG's role in the AAG. The cryosphere chapter was coauthored by Ken Hinkel, Drew Ellis, and Ellen Mosley-Thompson. Kudos for a great job!!!

- ***Old and New Accounts:*** CrSG has established an arrangement by which its financial resources will be held in an account overseen by the AAG's central office. This will streamline the duties associated with the office of Secretary-Treasurer. Thanks are due to the various individuals who have held this position, especially its current occupant, Hengchun Ye.

- ***Call for Nominations:*** Mike Palecki and Rich Forster rotate off the Board this month. Thanks are due them for their service in matters large and small. Two replacements will be elected at the Business Meeting the evening of March 16. Our bylaws state that a call for nominations should be circulated prior to the annual business meeting and this paragraph constitutes that call. Please send nominations to Fritz Nelson (fnelson@udel.edu). Following our long-time custom, nominations this year will also be accepted from the floor during the business meeting.

- ***Permafrost Activities:*** Jerry Brown, President of the International Permafrost Association, sent the following news item:

Both the U.S. and International Permafrost Associations report major activities this past year. The IPA held its Eighth International Conference on Permafrost in Zurich in July. The U.S. was represented by over 50 participants; a number of whom are Specialty Group members. Details are available on the new web site (www.geo.uio.no/IPA/) including activities for ten working groups, ordering information for the 230-paper proceedings, and full text of the News Bulletin, *Frozen Ground*.. The IPA and IGU co- sponsor activities of a periglacial/cold regions commission. IPA is engaged in the planning of the IPY and WCRP Climate and Cryosphere (CliC) activities. Its Arctic Coastal Dynamics

project recently was designated as the IGBP-LOICZ regional Arctic program. A joint project on glaciers and permafrost in mountains is being organized under joint IPA and International Commission on Snow and Ice. Jerry Brown is President of IPA (2003-2008) and he will report on these activities in Philadelphia.

The U, S, Permafrost Association (USPA) is a relatively new membership organization with about 170 individual, institutional and corporate members representing diverse cryospheric interests and organizations (www.uspermafrost.org). The USPA sponsors sessions at annual professional meetings in the U.S. In December it organized sessions on terrestrial and planetary permafrost at the American Geophysical Union meetings in San Francisco. The U.S. is organizing the next permafrost conference in Fairbanks in early summer 2008.

• ***Polar Geography***: The journal *Polar Geography* is perfectly suited to the needs of many CrSG members. Published by Bellwether Publishing, Ltd. (the same outfit that publishes *Physical Geography*), *Polar Geography* has a 25+ year history of publishing geographical research pertaining to both polar regions. The journal's publisher, Victor Winston has been extremely supportive of the AAG in general and CrSG in particular. The journal's current focus is on original research concerned with high-latitude regions, in both the natural and social sciences. Contributions from graduate students are welcome. The journal is pleased to consider longer contributions based on, for example, thesis work or reporting results from coordinated international research programs. My own experience with this journal has been excellent. It offers rigorous reviewing, close editorial attention, a flexible format, and rapid turnaround time to publication. The editor, Kees van der Veen of Ohio State, has been very successful in attracting high-quality contributions during his several-year tenure. Examination of any recent issue will demonstrate the current high quality of the journal. More information about *Polar Geography* can be obtained at: <http://www.bellpub.com/pgg/index.html> or from the editor at <vanderveen.1.osu.edu>.