

Eastern
Snow
Conference

Proceedings of the

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Annual Meeting



PROCEEDINGS OF THE
FORTY-FIFTH ANNUAL
EASTERN SNOW CONFERENCE

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FOREWARD

The 45th annual Eastern Snow Conference (ESC) was held in Lake Placid, N.Y. at the Howard Johnson Resort Lodge on June 8th and 9th, 1988. Sixty-six delegates attended the Conference. There were twenty papers presented at three separate sessions and a very active poster session with seven presentations. A special focus of the meeting was East Coast snow storms as a historical remembrance of the 100th anniversary of the 'Blizzard of 1888'. David Ludlum gave the keynote address entitled 'The Blizzard of 1888 in Historical Perspective' which was followed by an extensive slide presentation by Judd Caplovich which was material taken from his book — "Blizzard! The Great Storm of '88".

With the interesting level of papers and the lovely setting of Lake Placid, both these things made the meeting a very enjoyable event. I would like to extend my special thanks to Bill Gannon, Larry Martens and Leanna Sweet for all their work in making the 45th ESC in Lake Placid a successful meeting.

Membership in the ESC is open to all interested individuals. Annual dues are only fifteen dollars (U.S.) — twenty dollars (CDN) which includes one copy of the Proceedings, plus any other data distributed by ESC. Interested individuals are asked to contact the Secretary — John Metcalfe. Additional copies of the current Proceedings and all back issues can be obtained from the Secretary.

The Eastern Snow Conference Meeting is co-sponsored by the American Geophysical Union and the American Water Resources Association.

Publication of these proceedings are made possible in part by Corporate memberships in the Conference held by the following organizations.

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An exciting meeting is planned for Quebec City in June, 1989. See everyone there.

John Lewis
Editor - 1988

PROCEEDINGS OF THE EASTERN SNOW CONFERENCE
 FORTY-FIFTH ANNUAL MEETING, JUNE 8th and 9th , 1988

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THE EASTERN SNOW CONFERENCE

The Eastern Snow Conference (ESC) is a joint US/Canadian organization which was founded in the 1940's. It is an association of people interested in research and applied aspects of the study of ice in all its forms, especially snow. The principal activities of the ESC are the organization of an annual meeting, in the US or Canada in alternate years, and the production of the annual Proceedings of the Eastern Snow Conference, which now form more than forty volumes deposited in libraries throughout North America and Europe. The annual meetings are sometimes held in major cities such as Washington, Montreal, Toronto or Boston and sometimes in smaller cities such as Peterborough, Oswego, Portland or Fredericton.

The members of the ESC are a very diverse and, over the years, fluctuating, group. They include professional snow surveyors, engineers and technologists (of various stripes), professors and students, hydrologists and biologists, people responsible for keeping roads clear of snow and rivers free of ice, and others interested in snow and agriculture. The members are drawn from all parts of eastern North America, they live and work in places which extend from Maryland to the high Arctic. The line between the territory of the ESC and its counterpart in the other half of the continent, the equally venerable Western Snow Conference, is not a precise one. Residents of the Mid-West and of the Prairie provinces seem to join one or the other organization on the basis of personal whim such as a preference for Reno, Nevada over Bangor, Maine as a desirable meeting place...

In recent years, the annual ESC meetings have included sessions on snow and small mammals, snow and buildings, river ice, permafrost, remote sensing of snow and ice, biology of sea ice, snow and ice on lakes, measuring snow and ice, hydroelectricity and snow and ice, glaciers, icebergs, snow and farming etc. etc.

Eastern Snow Conference est une organisation internationale canado-américaine fondée dans les années '40. Elle regroupe des gens qui ont des intérêts communs dans l'étude théorique et pratique de la glace sous toutes ses formes, en particulier sous la forme de neige. Eastern Snow Conference a comme activités principales d'organiser sa réunion annuelle en alternant le site du Canada aux Etats-Unis, d'en produire les comptes-rendus qui se montent maintenant à plus de quarante volumes que l'on peut trouver dans les bibliothèques de l'Amérique du Nord et d'Europe. La réunion annuelle peut se tenir tout aussi bien dans des villes importantes comme Washington, Montréal, Toronto ou Boston comme dans des plus petites comme Peterborough, Oswego, Portland ou Frédéricton.

Les membres de Eastern Snow Conference représentent un grand nombre de domaines reliés à la neige et la glace. On y retrouve des spécialistes des relevés de neige, des ingénieurs et des techniciens, des professeurs et des étudiants, des hydrologues et des biologistes, des gens ayant la responsabilité d'entretenir les chemins en hiver ou de contrôler la glace en rivière, d'autres ayant quelque'intérêt dans la neige et l'agriculture. Tous ces membres viennent de l'est de l'Amérique du Nord et peuvent y habiter du Maryland, U.S.A., à l'Arctique. D'ailleurs la ligne qui sépare le territoire de Eastern Snow Conference à son pendant de l'ouest la vénérable Western Snow Conference est assez diffuse. Les habitants du centre-ouest américain ou des Prairies peuvent choisir de rallier une ou l'autre organisation sur une base très personnelle comme de préférer d'aller à Reno, Nevada plutôt que Bangor, Maine pour leur colloque annuel.

Dans les dernières années, aux réunions annuelles de Eastern Snow Conference on a tenu des sessions sur la neige et les petits mammifères, la neige et le bâtiment, la glace de rivière, le pergélisol, la télédétection de la neige et de la glace, la biologie de la glace marine, la neige et la glace lacustres, la mesure de la glace et de la neige, l'hydroélectricité et la glace et la neige, les glaciers, les icebergs, la neige et l'agriculture, etc...

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1987-88

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PRESIDENT'S PAGE

Last year, the first President's Page appeared in the Proceedings. The reason for adding this feature was to provide a summary of general activities of the organization and to give reports of the three committees, all in as concise a manner as possible. So this is only the second President's Page, continuing a very young tradition; on the other hand, the Eastern Snow Conference itself is becoming truly venerable - the activities described here were associated with the 45th Annual Meeting.

In General.....

The past year was an active one behind the scenes. Members of each of the ESC's offices prepared revisions to the list of duties of their respective offices and circulated the revisions at an executive meeting. The intention of this exercise was to increase efficiency, both within and between functions, and to seek new ideas - like this Page - through critical self-examination of past activities. The ESC's Constitution was also examined, with minor changes proposed, and ratified at the 45th Meeting.

Committees

1. Research Committee. The Committee's mailing list was revised in an effort to increase the constituency reached by the Student Paper Competition. Over 150 new addresses were added so that the list now includes 226 colleges and universities in the U.S. and 142 in Canada.

Mauri Pelto, a Department of Geology student at the University of Maine at Orono, won this year's competition for his presentation of results of research on glaciers in the North Cascade Range. His paper appears later in these Proceedings and readers are referred to it as a fine example of a student's scientific reporting. For his efforts, Mauri won a cash prize, his expenses to the Meeting, and the third Wiesnet medal.

2. Snow Survey Schedule Committee. As usual, the snow survey schedule was circulated to members and agencies collecting data. Survey dates coincided, more or less, with passes of Landsat 5.

A questionnaire was circulated to determine the status of the snow surveying network in the northeastern part of the continent. The responses produced results of interest to all ESC members and their compilation appears as a special attention to these Proceedings.

3. Equipment Committee. Twenty-eight manufacturers were invited to display equipment this year and at the end of these Proceedings there are one-page descriptions from the manufacturers who availed themselves of the opportunity.

At the Conference, the Equipment Committee circulated a questionnaire soliciting advice from the membership on making improvements to subsequent equipment features.

Moving On.....

Changes. We hear alot about changes these days - the air is changing, the water is changing, and enough theories abound so that we have groups of "freezers", and "boilers", depending on whether the prediction is for global cooling or warming. The character of the Eastern Snow Conference is changing too. Some think it's becoming too academic while others see

pure science as the way to get the information required by managers operating in a complex environment. Both arguments have merit and at times we need to remind ourselves to have patience — academics need to listen to the real problems of operators, and operators need to persist in their efforts to inform academics. Regardless of viewpoint, a paper in the next Snow Conference is an excellent way to begin accomplishing these things because the Eastern Snow Conference binds us all in a society with a common interest in snow and ice.

Throughout the north-east, a snow and ice society is of considerable importance in a changing world, and we should treat it more like the close-knit group it should be. Come to the next Annual Meeting, submit a paper, bring a student or a colleague, take part in the discussion, make new contacts and renew old acquaintanceships. Tell the Executive what you think should be happening.

Already, plans are being made for the 46th Meeting which will be held in beautiful and historic Quebec City next June. The program will be of exceptional interest, and we hope to see you there.

D.A. DAUGHARTY