

THE DEVELOPMENT AND ROLES OF THE EASTERN SNOW CONFERENCE

(with an Index to and Classification of the Proceedings 1952-1984)

by

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ABSTRACT

The Eastern Snow Conference is a U.S. - Canadian organization, founded in the late 1930's, devoted to the study of ice in all its common forms, notably snow. It began in the United States as a counterpart to the Western Snow Conference (which is now over 50 years old) and to the short-lived Central Snow Conference. For many years now, it has met in Canada and the States in alternate years. Although the principal function of the group is the organization of an annual conference, it might better be called the Eastern Snow Association as its functions include the activities of various standing committees, notably the Equipment and Snow Survey and Research committees which work year-round. It can be argued that the word "Conference" in the title of the organization is used in a sense which is closer to that in certain sports - as in, for example, a football conference. The territory of the ESC is eastern North America but it would be difficult to draw a line through the Mid West and Prairies to mark its western limit.

This paper was conceived as an appropriate contribution to the development of the Eastern Snow Conference during a year in which one of the authors was President. The idea is to bring together and tabulate some of the information which is available in the Proceedings, of which there are now some thirty volumes. These Proceedings represent a remarkable contribution to ice, including snow, science and technology. The paper concludes with an index and subject classification of all papers in the Proceedings to date.

Introduction

Let it be said at the outset that the term "Eastern Snow Conference" is misleading. The word 'Conference' in this context, is used rather as in the expression 'football conference'. It means 'association' even though the principal activity of this particular association is the organization of an annual conference. This paper is being presented at a conference of the Eastern Snow Conference! The use of the word 'snow' in this title is also misleading as (see below) the association, from the beginning, has been devoted to the science and technology of many forms of ice, not simply snow. Indeed it can be argued that more of the association's time and energy have been devoted to ice forms other than snow than have been devoted to snow itself. The word 'Eastern' is vague, and misleading. It is difficult to define and it is not a word which easily evokes such important parts of the territory of the Eastern Snow Conference as Baffin and Ellesmere Islands. Presentations at meetings have been made by people from as far west as California and as far east as Belgium.

To paraphrase the Forewords to various Proceedings, the Eastern Snow Conference is a more or less informal group of businessmen, engineers, foresters, hydrologists, scientists and educators, mainly from the eastern United States and Canada, which meets annually at locations in the eastern United States and Canada. The purpose of the meetings is the inter-change of information related to "snow, ice, frost, hail and other phenomena" associated with cold weather or climate. The association publishes an annual Proceedings of its deliberations.

The history of the ESC is summarized in a most effective fashion by Lansing (1982). We rely on this article for general background information.

The first meeting of the ESC was held in 1939/40 and meetings continued after the War. The first volume of the Proceedings is based on papers presented at the 1952 meetings, at what was the ninth official meeting of the group.

Although Proceedings have been published for every meeting since then, some volumes contain papers from two meetings so that the 1983 Proceedings (the latest to be included in this analysis) were Volume 28.

The early history of the ESC overlaps with that of the Western Snow Conference which has had meetings and published Proceedings since 1933 (see Henderson 1982). Our 1982 Proceedings are in fact a volume representing a joint meeting of the two groups to mark the Fiftieth Anniversary of the Western Snow Conference (WSC). Although the WSC is the senior partner here, Lansing (1982) carefully points out that the first formal snow survey work was undertaken in the East (in 1903) although Dr. J.E. Church of the University of Nevada, a powerful influence on the WSC, is rightly regarded as the 'father' of this particular type of snow work. For many years the WSC was a chapter of the American Geophysical Union and published its Proceedings via that organization. It is possible that the ESC had a similar affiliation in its very early years.

In the early days also, there was a Central Snow Conference but it lapsed after producing a few Proceedings. It has been suggested that there is insufficient snow in the Mid West or the Prairie Provinces to sustain such an organization! This is a doubtful argument on a number of counts: (1) the contributions of authors from those regions to meetings of both the ESC and the WSC have been numerous, (2) scarcity of snow can heighten interest in it - as our water forecasting colleagues know, and (3) as has been explained, 'Snow Conference' is a misnomer and the central part of the continent certainly has enough ice problems to keep up interest in this subject area. A CSC addendum follows this paper.

However, for whatever reason, the ESC and the WSC nowadays, saw off the continent between them. The line down the middle is not evident to the human eye, rather it shifts according to the interests of our Central colleagues, tending, we suspect, to result in more of them attending meetings of the ESC than of the WSC. There is a long history of links between the two Conference.

Overview of information in the ESC Proceedings

The Proceedings contain a great deal of information which might one day be of interest to historians of science and technology. Particular volumes include lists of delegates and their affiliations, notes on current activities and problems, exchanges between the ESC and the WSC etc. Some of this information is tabulated in Table 1.

The ninth official meeting of the ESC, upon which the first Proceedings are based, was held in Springfield, Mass. in 1952. There were seventy people in attendance.

Early volumes of the Proceedings contain a good deal of information about the organization and rationale of the Conference. The constitution is published, dues are levied for the first time, there was a great deal of attention paid to the site of annual meetings, to expanding and diversifying membership etc. etc. Virtually all of the early meetings were in New England, although members were drawn from a much wider area. There were discussions about this culminating in the early 1960's with the policy of alternating meetings between the United States and Canada.

Over time, various ongoing activities became institutionalized, the Research Committee, the Equipment and Snow Survey Committees and the Student Prize all came into formal being in the 1960's and early 1970's.

In the early years it was normal for the meetings to include rather less than ten papers (although there were twenty seven at Quebec City in 1963). Since the late 1960's this has tended to become ten or more with a marked increase in recent years.

Attendance at meetings has varied but a total of between fifty and one hundred has been typical for decades out of a membership of between one hundred and two hundred.

The meetings were held in February until 1979 when, over the dead body of one of the authors of this article, they were shifted to June. Supporting arguments for the move included snowstorms and the interests of spouses. Can you imagine the National Sunbathing Society moving its meetings to the winter to avoid the sun?

With regard to 'Canadian content', it is clear that the ESC was consciously bi-national from the beginning. Although the formal alternation of meetings and sharing of officers between the two countries came somewhat later, Volumes two and three of the Proceedings were published by Ontario Hydro and the Shawinigan Power Corporation, Quebec, respectively. These two organizations had a very high profile in the early days of the Conference. In 1963, a very large meeting was held in Quebec City. It is interesting that the WSC appears to have been less obviously bi-national (see Henderson, 1982). Perhaps this reflects the dominance of Americans in the Arctic there (via Alaska) and the relatively sparse population of Western Canada in contrast to the East. In the East, subarctic and Arctic papers are produced by both Canadians and Americans, and of course there has been a shared concern in ice problems of the St. Lawrence and its Seaway and in the Baie James and Churchill Falls Power Projects etc. etc.

The most southerly meetings of the ESC were held in Washington, DC, the furthest north in Quebec City. There have been no meetings in the Arctic and subarctic. The furthest east meetings were held in Fredericton, NB, the furthest west, if we exclude Reno in 1982, in Toronto.

Officers of the Eastern Snow Conference

Table 2 was produced from the title pages of the Proceedings. Until 1966-67 there were six people on the Executive, since then there have been seven, the addition being at first a Member-at-large, later the Editor of the Proceedings.

Although in the first year (1951-52) there was a clear dominance of government employees, there was a healthy split between the private and public sectors for the first 20 years of the Conference's existence. During that time there was only token representation from the educational sector, no representation at all in some years. Beginning in 1971-72, there was a marked reduction in private sector officers, their place being more or less filled by educational sector persons. In the early years, the private sector officers were largely drawn from power companies.

The sequence of Presidents reflects the pattern outlined in the last paragraph. Early Presidents included several from water power companies plus strong representation from the USGS, the Corps of Engineers, and the Weather Bureau. The first President from the educational sector was Elmer Munger from Norwich University, Vermont, in 1963-64, the next was Raymond Falconer of SUNY, Albany and there are three more from the educational sector in the last ten years of the table.

There were no Canadians on the Executive in 1951-52, but thereafter it is clear that the ESC has tried to maintain its bi-national character. H.M. Finlayson of Shawinigan Power Company (1954-55) was the first Canadian President followed eight years later by L. Cartier, of Cartier and Leclerc Limited. Since 1971-72, following two years with Canadian Presidents, there has been a practice of alternating Presidents between Canada and the United States. There has usually been a very reasonable split between Canadians and Americans on the Executive with Americans dominating in most years.

The first Secretary was Dean Bogart of USGS, Albany, NY. He occupied the post from 1951-1957. The next two Secretaries were Gordon R. Ayer (1958-1974) and Ron Allen (1974-78, Treasurer in 1979-80). Gordon Ayer, who also came from the USGS at Albany, was one of the most important influences on the Conference during its history, remaining as Secretary Emeritus until his death. Bob Sykes of SUNY, Oswego, was Secretary or Secretary-Treasurer from 1978-1981 when Don Dunlap, now a consultant, having retired from Rutgers University, a former President, took over until the present day.

It would appear that the Presidents of recent years are more diverse, in terms of their backgrounds than those of earlier years. This reflects a diversification of Conference

interests into the broader fields of snow and ice research which is discussed below.

Authors of the Eastern Snow Conference

The private sector/government mix of authors (Tables 3 and 4) is quite similar to that of Presidents. The educational sector, although not represented in the very first year, is more or less consistently represented throughout (except Volume 12) becoming particularly notable during the last ten years when it has tended to dominate.

Interestingly enough, the first paper delivered at an Eastern Snow Conference by an author from the educational sector was that of a Canadian (Volume 2). In only six of the twenty-eight volumes do Canadian authors outnumber Americans with Canadian papers outnumbering American ones in nine out of the twenty-eight cases. To an extent this is affected by the location of the meetings.

Another feature of Table 3 is the increase in the number of papers delivered in any one year which was mentioned earlier. In the early years five to ten papers per meeting was the norm, today twenty or more are not unusual. Part of the reason for this was the introduction of Poster Sessions in 1980.

In recent years, the prize-winning Student Paper has become a feature of each Proceedings.

Topics treated at ESC meetings

An overview of topics addressed by authors at ESC meetings can be gained from the Index and Subject Classification which follow this article.

The diversity of topics is notable. It is clear from these listings why 'Snow' is misleading in the name of our organization. Even in the very earliest years, the power corporations, which were important instigators of the ESC, were very interested in phenomena such as frazil and anchor ice. Thereafter topics have reflected the full spectrum of interests in ice across eastern North America. From glaciers and permafrost in the empty north to road clearing and building loading in the crowded south, from cable icing on the top of Mt. Washington to sea ice in the St. Lawrence and elsewhere. From forest and mountain snowpacks, via river ice jams to lake phenomena including the lake effect storms of the Great Lakes. From upper atmosphere ice forms and weather forecasting to small mammals in the snow. The initial interest in power generation continues as a more or less continuous thread of activity, shifting from the relatively tiny watersheds of New England to the huge Churchill Falls and Baie James projects of Newfoundland and Quebec. There has, in recent years, been increasing concern with water quality with pioneer papers on acid snow etc. By comparison the WSC is a relatively specialized organization, focussing strongly on multi-purpose water forecasting.

Concluding remarks

One of the great strengths of the ESC is the mix of people which it attracts. It acts as an interface between diverse groups and individuals in ice science and technology. Members include a very full spectrum of those interested in ice phenomena, interests which range from the most practical and applied to the most esoteric and theoretical. It is extremely important that successive Executives monitor activities to ensure that no single topic or regional or professional group dominates the organization for extended periods of time. We have tried, recently, for example, to identify 'themes' for meetings. Last year we had 'snow loading and buildings', this year 'snow and ice research in Quebec'. This is a useful idea as long as it does not preclude the acceptance of papers on any other suitable topic. The programme organizers must always make it clear that reports on equipment, techniques and current projects, which shed light on everyday problems of snow and ice work, are a welcome and valued part of meetings. The decline of private sector involvement in recent years is a real concern. We must try to rectify this in future. One way to do this would be to encourage private groups to host meetings as they did in the past.

As membership in the ESC is so diverse in terms of background and as the annual meetings move over quite a large area, it is inevitable that there will be a good deal of variation in the size and mix of clientele between meetings. Each Executive should however consciously address this matter, never deciding on a meeting site, a host, or a meeting theme casually.

The existence of the WSC should not be ignored. In the past it was customary for the President of the ESC and the WSC to attend each other's meetings. This has lapsed although, as indicated above, contact between the two organizations has not been lost. We would suggest that it would be worthwhile, from time to time, to print a complete Index of the WSC Proceedings in our Proceedings. The WSC might be interested in printing our index in their Proceedings*.

The ESC Proceedings are now a valuable source of information for those in snow and ice work. Recent Executives and Editors have gone to some trouble to see that sets of Proceedings are available in key libraries in Canada, the U.S. and abroad. This effort must continue so that society gains full benefit from the Conference's efforts over the years. All members should be encouraged to solicit subscriptions to the Proceedings, which are not expensive, for their organizations' libraries. Full sets of Proceedings are now available at low cost.

Finally if we cannot persuade the ESC to return to a winter meeting date, can we give thought to the idea that plans begin to be made for an annual meeting to be held in the Arctic or Subarctic in the near future? After all, in terms of area, most of our 'territory' is in those regions.

We are most grateful to Dr. Don Dunlap for his comments on this paper.

References

Henderson, T.J., 1982. Western Snow Conference - the first fifty years. Proc. Eastern Snow Conference, 39, 1-5 (also Proceedings), WSC, 50).

Lansing, L. 1982. Reminiscences of Eastern Snow Conferences 1950-81. Proc. Eastern Snow Conference 39, 6-9 (also Proceedings, WSC, 50).

* The 1984-85 and 1985-86 Executives initiated action on this (ed.)

Addendum, on the Central Snow Conference

Volume I of the Proceedings of the Central Snow Conference (CSC) was published by Michigan State College, East Lansing, Michigan in 1942. It is a 214 page report on the annual conference and activities of the CSC in 1941. The President was Melville W. Kyler, the Secretary-Treasurer, who signed the Proceedings, W.U. Garstka. A note (p. 213) records that the CSC came into being as a result of a meeting, in December 1940, called by Commander F.W. Reichelderfer, Chief, US Weather Bureau at Detroit, Michigan. At this meeting, some 40 persons founded the CSC which, at its 1941 meetings, attracted 275 delegates. The Proceedings include sections on Snow (in hydrological cycle, snowmelt, radiation and snow etc); Snow and Highway Transportation; Snow, Recreation and Wildlife; Snow, Forestry and Agriculture; "Cryologic Hydrology" and reports of various standing committees. Among these last was a recommendation that the CSC affiliate with the American Geophysical Union. Authors represented include: J.E. Church (the "father of snow surveying"); H. Landsberg (University of Chicago); Robert E. Horton and W.G. Hoyt (USAs). A number of Canadian authors were involved. A copy of this Volume, courtesy Dr. Don Dunlap, has been deposited in Trent University Library, Peterborough, Ontario K9J 7B8.

TABLE 1 SUMMARY OF CONTENTS OF EASTERN SNOW CONFERENCE PROCEEDINGS WITH NOTES ON CONFERENCE ACTIVITY

Volume No.	Year	Proceeding No.	No. of Pages	No. of Papers	Location of Conference	Date of Conference	Notes
Vol. 1	1952	9th	63	5	Springfield, Mass.	Feb. 14 & 15	<ol style="list-style-type: none"> 1. Why Organized → Believed that "Snow, ice, & Frost" important in the Northeastern part of the U.S.A. 2. Constitution → By-Laws state: <ol style="list-style-type: none"> a) Officers are elected annually b) Meetings similar to those held by other Tech. Societies. 3. Gradually extended to include Canada and Northern Activities. 4. Mailing List → Engineers, Business Men, Scientists, Laymen (230 Total). 5. 70 persons in attendance of 1952. 6. No Publications Committee 7. Publication of Proceedings → Mr. A.S. Walker, V.P. New Eng. Power Co. Printed by New Eng. Power Service Co. (in index)
Vol. 2	1953 1954	10th } 11th }	39	9	Albany, N.Y. Greenfield, Mass.	Feb. 12 & 13 Feb. 11 & 12	<ol style="list-style-type: none"> 1. Institute a formal membership: \$1.00 per year → 139 paying members (1954). 2. "The Board Coverage and Diversified Interest possibly are the main reasons for the continuing success of the Organization". 3. An increase in Can. memberships 4. Publication of Proceeding → The Hydro Electric Power Commission of Ontario
Vol. 3	1955	12th	106	10	Burlington, Ver.	Feb. 10 & 11	<ol style="list-style-type: none"> 1. Have always met in New Eng. U.S.A. 2. Publication of Proceeding → The Shawinigan Water & Power Co.
Vol. 4	1956 1957	13th } 14th }	128	9 8	Hanover, N.H. Syracuse, N.Y.	Feb. 9 & 10 Feb. 7 & 8	<ol style="list-style-type: none"> 1. Eastern Snow Conference Constitution published in Proceedings 2. Report on Committee on Snow statistics 3. List of Papers not published in proceedings. 4. Interim Reports - pp. 5-8, 43 5. Publication of Proceeding - The Ontario Hydro Printing Dept.
Vol. 5	1958	15th	73	5	Worcester, Mass.	Feb. 6 & 7	<ol style="list-style-type: none"> 1. List of Papers not published in Proceedings 2. Publication - Philadelphia Electric Co., & New England Power Co.
Vol. 6	1959 1960	16th } 17th }	207	10 7		Feb. 5 & 6 Feb. 4 & 5	<ol style="list-style-type: none"> 1. List of Papers not published in Proceedings. 2. Publication - Niagara-Mohawk Power Corp.
Vol. 7	1961 1962	18th } 19th }	188	8 9		Feb. 9 & 10 Feb. 8 & 9	<ol style="list-style-type: none"> 1. Dues include \$2.00 for Membership 2. Research Committee → Snow Research Projects - pp. 175-185. 3. Publications Containing Abstracts of Patterson Snow, pp. 186-188. 4. List of Papers not published in Proceedings 5. Publication - Rensselaer Polytechnical Institute.

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Table 1 (cont'd)

Volume No.	Year	Proceeding No.	No. of Pages	No. of Papers	Location of Conference	Date of Conference	Notes
Vol. 8	1963	20th	246	27	Quebec City, Quebec, Can.	Feb. 14 & 15	<ol style="list-style-type: none"> 1. Committee on Research pp. 215-228: Group A - New Projects Group B - Projects listed previously Group C - Still Active but unchanged Section II - Bibliographies containing Papers on Snow. 2. List of Papers not published in Proceedings 3. Publication - Rensselaer Polytechnical Institute.
Vol. 9	1964	21st	108	7	Utica, N.Y.	Feb. 13 & 14	<ol style="list-style-type: none"> 1. Committee on Research, p. 96 Same format as '63 2. Selected Bibliography 3. List of Papers not published in Proceedings 4. Publication -
Vol. 10	1965	22nd	132	7	Hanover, New Hampshire	Feb. 4 & 5	<ol style="list-style-type: none"> 1. Committee on Research, pp. 128-132 2. List of Papers not published in Proceedings 3. Publication -
Vol. 11	1966	23rd	119	9	Hartford, Connecticut	Feb. 10 & 11	<ol style="list-style-type: none"> 1. Committee on Research, pp. 97-108 2. Membership Dues for 1967 - \$3.00 3. Publication -
Vol. 12	1967	24th	107	7	Niagara Falls Ontario, Can.	Feb. 9 & 10	<ol style="list-style-type: none"> 1. Committee on Research, pp. 92-107 2. Publication - Ontario Hydro
Vol. 13	1968	25th	150	12	Boston, Mass.	Feb. 8 & 9	<ol style="list-style-type: none"> 1. Committee on Research, pp. 140-148 2. Report of Equipment Committee (1968) 3. Publication -
Vol. 14	1969	26th	125	11	Portland, Maine, U.S.A.	Feb. 6 & 7	<ol style="list-style-type: none"> 1. Committee on Research, pp. 115-125 2. Snow Survey Seminar 3. Publication -
Vol. 15	1970	27th	111	10	Albany, N.Y.	Feb. 12 & 13	<ol style="list-style-type: none"> 1. Committee on Research, pp. 99-107 2. Report on Equipment Committee (1970) 3. Eastern Snow Conference Selected Bibliography (1970) 4. Student Prize for Research - Proposed Criteria 5. Publication - Ontario Hydro, Quebec Hydro, New Eng. Power Co, Shannigan Engineering.
Vol. 16	1971	28th	136	9	Frederickton New. Bruns.	Feb. 4 & 5	<ol style="list-style-type: none"> 1. Report on E.S.C. Research Committee, pp. 124-131 2. Index to the Proceedings of the E.S.C. (1952-1969). 3. Selected Bibliography (1971) Arranged in the following categories: <ol style="list-style-type: none"> a) Properties of Snow & Ice b) Precipitation & Accumulation c) Snow Pack Measurements d) Snow Melt e) Stream Flow f) Lake & River Ice g) Highways & Buildings h) Soil Water & Frost i) Remote Sensing

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Table 1 (cont'd)

Volume No.	Year	Proceeding No.	No. of Pages	No. of Papers	Location of Conference	Date of Conference	Notes
Vol. 16 cont'd							<ol style="list-style-type: none"> 4. List of Studies in progress. 5. Publication - Corporate Marine Ships, Chas. T. Hain, Hydro Quebec, New England Power Co., Ontario Hydro, Shanningan Engineering Co. Ltd.
Vol. 17	1972	29th	158	13	Oswego, N.Y.	Feb. 3 & 5	<ol style="list-style-type: none"> 1. Report of E.S.C. Research Committee, pp. 147-159 2. List of Studies in Progress 3. Publication - Corporate Marine Ships, Chas. T. Hain, Inc., Hydro Quebec, New Eng. Power Co., Ontario Hydro, Shanningan Engineering Co. Ltd.
Vol. 18	1973	30th	152	12	Amherst, Mass.	Feb. 8 & 9	<ol style="list-style-type: none"> 1. Report on E.S.C. Research Committee, pp. 136-146 2. Selected Bibliography (1973) pp. 147-152 3. Membership Dues for 1973 - \$5.00 4. Publication - Corporate Marine Ships, Chas. T. Hain, Inc., Hydro Quebec, New Eng. Power Co., Ont. Hydro, Shanningan Engineering Co. Ltd.
Vol. 19	1974	31st	194	12	Ottawa, Ont.	Feb. 7 & 8	<ol style="list-style-type: none"> 1. Report on E.S.C. Research Committee, pp. 181-191 2. Selected Bibliography (1974) pp. 191-194 3. Publication - Chas. T. Hain Inc., Hydro Quebec, Ontario Hydro, Ont. Hydro Water Resource Branch
Vol. 20	1975	32nd	151	12	Manchester, New Hampshire	Feb. 6 & 7	<ol style="list-style-type: none"> 1. Index to the Proceedings of the E.S.C. (1952-1974) - Subject Index included: a) Table of Contents by year including page No. b) Papers published elsewhere 2. Publication - Chas T. Hain, Inc. Hydro Quebec, Ontario Hydro Water Resources Branch, New Brunswick Dept Fisheries & Mines.
Vol. 21	1976	33rd	188	13	Glens Falls, New York	Feb. 5 & 6	<ol style="list-style-type: none"> 1. Report on E.S.C. Research Committee, pp. 172-182 2. Selected Bibliography (1976) 3. List of Studies in Progress 4. Report on Equipment Committee (1976) 5. Publication - Chas. T. Hain, Inc., Hydro Quebec, Ontario Hydro Water Resources Branch, New Brunswick Department of Fisheries & Mines
Vol. 22	1977	34th	174	11	Belleville Ontario, Can.	Feb. 3 & 4	<ol style="list-style-type: none"> 1. Publication - Chas. T. Hain, Inc., Hydro Quebec, Ontario Hydro Water Resources Branch, New Brunswick Department of Fisheries & Mines
Vol. 23	1978	35th	218	18	Hanover, New Hampshire	Feb. 2 & 3	<ol style="list-style-type: none"> 1. Eastern Snow Conference Constitution 2. Selected Bibliography (1978) 3. List of Studies in Progress, pp. 196-208 4. Report of the Snow Survey Schedule Committee 5. List of Attendees at E.S.C. 1978 6. Publication - Chas. T. Hain, Inc., Hydro Quebec, Ontario Hydro Water Resources Branch, New Brunswick Department of Fisheries & Mines, Anonymous E.S.C. Member

Table 1 (cont'd)

Volume No.	Year	Proceeding No.	No. of Pages	No. of Papers	Location of Conference	Date of Conference	Notes
Vol. 24	1979	36th	149	11	Alexandria Bay New York	June 7 & 8	<ol style="list-style-type: none"> 1. Eastern Snow Conference Student Award for Snow Research 1979 2. E.S.C. Results of Snow Survey Schedule Committee Questionnaire 3. List of Attendees at E.S.C. 1979 4. Publication - Chas. T. Hain, Inc., Hydro Quebec, Ontario Hydro Water Resources Branch, New Brunswick Department of Fisheries & Mines, Anonymous E.S.C. Member
Vol. 25	1980	37th	224	21	Peterborough, Ontario, Can.	June 5 & 6	<ol style="list-style-type: none"> 1. List of Studies in Progress 2. Selected Bibliography 1980 3. List of Attendees at E.S.C. 1980 4. Publication - Chas. T. Hain, Inc., Hydro Quebec, Ontario Hydro Water Resources Branch, New Brunswick Department of Fisheries & Mines
Vol. 26	1981	38th	129	18	Syracuse, New York	June 4 & 5	<ol style="list-style-type: none"> 1. Eastern Snow Conference Student Award for Snow Research 1981 2. E.S.C. Results on Snow Survey Schedule Committee Questionnaire 3. List of Attendees at E.S.C. 1981 4. Publication - Chas. T. Hain, Inc., Hydro Quebec, Ontario Hydro Water Resources Branch, New Brunswick Department of Fisheries & Mines, Niagara Mohawk Power Corp.
Vol. 27	1982	39th	228	31	Reno, Nevada	Apr. 19-23	<ol style="list-style-type: none"> 1. Joint Conference for E.S.C. & W.S.C. 2. Snow Notes e.g. - Recollections of An Old Timer & Snow Notes 3. List of Attendees at E.S.C. 1982 4. Publication - (cont'd)
Volume No.	Year	Proceeding No.	No. of Pages	No. of Papers	Location of Conference	Date of Conference	Notes
Vol. 28	1983	40th		27	Toronto, Ont.	June 2 & 3	<ol style="list-style-type: none"> 1. Report on E.S.C. Research Committee: List of Studies in Progress 2. Report on the Snow Survey Committee 3. Exhibitors Section 4. List of Attendees at E.S.C. 1983 5. E.S.C. Student Award for Snow Research 1983 6. Publication -

TABLE 2

NATIONALITY AND OCCUPATIONAL STATUS OF OFFICERS OF THE EASTERN SNOW CONFERENCE 1951-84
EXCLUDING STANDING COMMITTEES

Year	Educational Sector		Private Sector		Government Sector		Total Officers		(President)	Notes
	U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.		
1951-52			1		5		6	0	E.F. Childs (Corp. of Engineers, U.S.)	
1952-53			1	1	4		5	1	L.H. Mann, Connecticut River Prince Co., U.S.	
1953-54	1		2	1	2		5	1	E.C. Johnson, U.S. Weather Bureau	
1954-55			2	1	3		5	1	H.M. Finlayson, Shawinigan Paper Co., Can.	
1955-56	1		2	1	2		5	1	C.E. Knox, U.S. G.S. (3 employed by Power Companies)	
1956-57	1		1		3	1	5	1	L. Lansing, N.Y. Corporation Snow Survey, U.S.	
1957-58	1		2		2	1	5	1	A.T. Simmonds, New England Power Co., U.S. 3 employed by Power Companies	
1958-59			2	1	3		5	1	G.E. Townsend, U.S. Corp of Engineers	
1959-60			1	1	4		5	1	R.A. Lane, Philadelphia Electric Co., U.S.	
1960-61			2	1	3		5	1	G.S. Hayes, U.S.G.S.	
1961-62	1		1	1	3		5	1	R. Kresge, U.S. Weather Bureau, standing Committees not included	
1962-63	1		1	1	2	1	4	2	L. Cartier, Cartier and LeClerc, Can.	
1963-64	1		1	2	2		4	2	E. Munger, Norwich University Vermont.	
1964-65	1		2	1	1	1	4	2	O.Z. Bacon, Keenebec Water Power Co., Maine) 3 employed by power companies	
1965-66			2	1	2	1	4	2	G.H. Scruton, Shawinigan Engineering Co., Can.	
1966-67			1	1	3	2	4	3	J.A.S. Milne, Ontario Hydro, Can., More members at large	
1967-68			2		2	3	4	3	N. Lally, U.S. Corp. of Engineers.	
1968-69			2		3	2	5	2	L.L. Cross, Chas. T. Main Inc., Mass.	
1969-70	1		2		2	2	5	2	D.R. Campbell, N.E. Power Service Co., Mass.	
1970-71	1		1		3	2	5	2	G.P. Williams, N.R.C. Can. Canadian V.P.	
1971-72	1	1			3	2	4	3	D.N. McMullen, Energy & Resources Management, Ont.	
1972-73	1	1			4	1	5	2	R.E. Lautzenheiser, National Weather Service, U.S.	
1973-74	2	1			4		6	1	R.E. Falconer, SUNY, Albany	
1974-75	2	2			3		5	2	C.D. Hopkins, Jr., River Forest CDTM, Conn.	
1975-76	1	2			3	1	4	3	R.B. Dickison, Univ. of N.B. Canada.	
1976-77	2	2			2	1	4	3	A.R. Eschner, SUNY, Syracuse, U.S.	
1977-78	2	1			2	2	4	3	J.E. Peters, Water Survey of CAJAPA, N.S.	
1978-79	1	1			3	2	4	3	D.V. Duniap, Rutgers Univ., N.J.	

(cont'd)

Table 2 (cont'd)

Year	Educational Sector		Private Sector		Government Sector		Total Officers		(President) Notes
	U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.	
1979-80		1			3	3	3	4	S.S. Lazier, Queen's Univ., Ont.
1980-81	1	1			3	3	4	3	W. Tobiasson, USA-CRPEL
1981-82		1		1	3	2	3	4	B.E. Goodison, AES, Can.
1982-83		1		1	4	1	5	2	P.L. Hansen, Ducks Unlimited Canada.
1983-84		1	1		3	2	4	3	D.R. Wiesnet, Satellite Hydrology Associates, Va.

TABLE 3

NATIONALITY AND OCCUPATIONAL STATUS OF AUTHORS OF THE EASTERN SNOW CONFERENCE 1951-84
(This is a summary of information from Table 4)

Volume No.	Year	OCCUPATIONAL STATUS						Total Authors ^a		Total Papers ^a		
		Educational Sector		Private Sector		Government Sector						
		U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.	Joint
Vol. 1	1952	-	-	2	1	2	0	4	1	4	1	-
Vol. 2	1953-1954	-	1	4	-	4	1	8	2	7	2	-
Vol. 3	1955	1	-	1	4	4	1	6	5	5	5	-
Vol. 4	1956	1	2	2	-	4	2	7	4	7	2	-
	1957	-	-	1	-	5	3	6	3	6	2	-
Vol. 5	1958	1	-	-	-	2	2	3	2	3	2	-
Vol. 6	1959 _b	2	-	3	-	2	1	7	1	5	1	-
	1960	4	-	1	2	1	1	6	3	5	2	-
Vol. 7	1961 _c	2	-	2	-	3	4	7	6	5	2	-
	1962 _d	1	-	1	-	4	5	6	5	4	4	-
Vol. 8	1963 _b	1	1	1	4	9	14	13	17	10	13	-
Vol. 9	1964	4	1	-	2	1	3	5	6	2	4	1
Vol. 10	1965	-	1	-	-	4	2	4	3	4	3	-
Vol. 11	1966	-	2	2	-	7	3	9	5	6	5	-
Vol. 12	1967	-	-	1	-	5	4	5	4	3	4	-
Vol. 13	1968	2	1	2	1	7	2	11	4 _d	10	2	- _a

(cont'd)

Table 3 (cont'd)

Volume No.	Year	OCCUPATIONAL STATUS						Total Authors ^a		Total Papers ^a		
		Educational Sector		Private Sector		Government Sector		U.S.	Can.	U.S.	Can.	Joint
		U.S.	Can.	U.S.	Can.	U.S.	Can.					
Vol. 14	1969	4	2	3	-	7	-	14	2	9	2	-
Vol. 15	1970	6	5	2	-	3	1	11	6	6	4	-
Vol. 16	1971	7	1	-	2	4	5	11	8	7	4	-
Vol. 17	1972 _e	3	1	-	1	7	1	11	3	8	3	-
Vol. 18	1973	6	8	-	-	5	-	11	8	7	5	-
Vol. 19	1974	2	3	2	-	4	5	8	7	7	6	-
Vol. 20	1975 _f	3	8	-	-	2	2	5	10	4	7	-
Vol. 21	1976 _g	6	7	-	-	4	4	12	11	5	7	-
Vol. 22	1977	6	4	-	-	5	5	11	9	5	6	-
Vol. 23	1978	5	5	1	-	7	4	13	9	10	7	-
Vol. 24	1979 _h	3	7	2	-	5	-	10	7	5	5	-
Vol. 25	1980	6	11	2	-	6	6	14	17	9	12	-
Vol. 26	1981 _{da}	9	10	1	-	4	6	14	16	8	9	-
Vol. 27	1982 _i	9	8	3	-	26	5	38	13	23	6	1
Vol. 28	1983	6	17	-	6	7	14	13	37	7	18	-

FOOTNOTES FOR TABLE

(a) Author or Paper only counted if occupational status or nationality known.

(b) Occupational status of four (4) unknown.

(c) Occupational and Country status of one (1) unknown.

(d) One (1) author unknown.

(e) Occupational status of one (1) unknown, nationality of three (3) unknown.

(f) One (1) co-author, with Canadian paper, from Czech Academy.

(g) Occupational status of two (2) U.S. authors unknown, one (1) author from Austria.

(h) Occupational status of one (1) U.S. author unknown.

(i) Occupational status of two (2) authors unknown.

TABLE 4: Selected author and topics of the ESC

Without any reflection whatsoever on authors who are not included it is interesting to mention a few of those listed in Table 4 to give another perspective on the work and membership of the Eastern Snow Conference over the years. The number following the name is that assigned, in the following Index, to one of the author's papers.

R.W.Gerdel (1), SIPRE on snow gauges and other topics
J.G.Potter (19), AES, on snowfall in Canada etc.
George Cavadias (21), Shawinigan Power, on snowmelt in Ontario
R.A.Work (23), U.S. Department of Agriculture, Oregon, on water supply forecasting etc.
David Nutt (24), Dartmouth, on Labrador
Gunn & Douglas (29), Stormy Weather Group, McGill
Gold & Williams (30), NRCC, D.B.R, river ice and other topics
D.W.Boyd (66), also NRCC, snowloading and other topics
Vincent Schaefer, Schenectady, atmosphere snow crystals
H.C.Willett (52), M.I.T., and Jerome Namias, USWB, climatic change
Oscar Villeneuve (68), Quebec Weather Service, on that Service which he nurtured.
J.P.Bruce (73), AES, snowmelt and floods
Lincoln Washburn (1977), on permafrost and patterned ground
Hicks & Bolsenga (80), CRREL, on snow fence design
Bernard Michel (86), Laval, on river ice
T.L.Richards (84), AES, lake effect storms etc.
Bob Sykes (140), SUNY, Oswego, on the same topic
Davar & Bray (101), U. of New Brunswick, snowmelt and runoff etc.
Eric Anderson (106), USWB, modelling snowmelt etc.
Mike Bilello (118), CRREL, a variety of topics
Art Eschner (132), Syracuse, snow and trees
Marc Drouin (143), Laval, thermal ice shove
F.H.Theakston (144), Guelph, simulated snowstorms
Ray Falconer (157), SUNY, Albany, snow crystals etc.
Bob Dickison (172), U. New Brunswick, forest and snowpack etc.
Gord Mackay (177), AES, mapping snow etc.
George Ashton (192), CRREL, river ice
Ed. Langham (196), Laval, modelling snowmelt etc.
Gene Likens (202), Cornell, snow and pollution
Barry Goodison (207), AES, snow samples and sampling etc.
Wayne Tobiasson (220), CRREL, snow loading etc.
Sam Colbeck (221), CRREL, wet snow and other topics
Hok Woo (256), McMaster, high arctic snow and ice etc.
Andre Frechette (275), Quebec snow work etc.
Swanson & Golding (337), Northern Forest Research, Alberta and UBC, forestry and snow

It is possible to track some of these authors through various stages of their careers as titles, affiliations and fields of interest change.

While the ESC has attracted only a handful of authors from outside North America, they have been drawn from all over this continent, from south (e.g. Texas) to north (e.g. Alaska) and from west (e.g. California, Oregon, British Columbia) to east (Newfoundland). These authors have reported on work undertaken in the high polar regions, including Greenland and Antarctica, in the Himalayas and in Ecuador.

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OF THE

EASTERN SNOW CONFERENCE

1952 through 1984

This index is an updated version of that produced by the Research Committee in the 1975 Proceedings to increase the availability and utility of the information in papers presented at the annual meetings. The subject classification is the same as that used in the previous version.

Peter Adams
President
1984-85

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SUBJECT CLASSIFICATION OF PROCEEDINGS OF THE

EASTERN SNOW CONFERENCE

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