



ROGER JAMES EVAN BROWN

1931-1980

Dr. Roger Brown died in hospital in Ottawa, Ontario, on November 4, 1980 after a long and valiant battle with cancer. For nearly ten years he fought with great courage and determination to carry on a full and active life. This he did almost to the end but his condition gradually deteriorated, particularly during the last twelve months, and, despite his tremendous spirit and will to live, he finally succumbed. Roger was widely known as an authority on the distribution of permafrost in Canada and through his work established close friendships over the years. He will be sorely missed by his colleagues and many friends throughout the world.

Roger Brown was born in Toronto, Ontario, on 17 January 1931 and received his B.A. and M.A. degrees in geography from the University of Toronto in 1952 and 1954, respectively. He attended Clark University in Worcester, Massachusetts, USA from September 1956 to July 1957 where he completed the course work for his Ph.D. From September 1957 to August 1958 he studied at the Scott Polar Research Institute in Cambridge, England, gathering information for his thesis "Permafrost in Canada — Its Effect on Developments in an Area of Marginal Human Activity". He received his Ph.D. in geography from Clark University in June 1961.

During the summers of 1950 and 1952 he carried out field and office studies as a student assistant in the Geographical Branch, Department of Mines and Technical Surveys, Ottawa. In August 1951 he was a Canadian observer on the Arctic Weather Stations Resupply Mission (U.S. Navy Operation NANOOK 51), sailing aboard the icebreaker U.S.S. *Eastwind*.

Roger joined the Division of Building Research, National Research Council of Canada, in June 1953 and immediately began studies to determine the distribution of permafrost in Canada and to investigate the climatic and terrain factors that affect the formation and stability of permafrost. He devoted his career to permafrost research and carried out both exploratory and detailed field studies throughout the permafrost region in Canada. In 1954 he was a member of the site survey team that spent about seven months in the Mackenzie Delta area carrying out investigations which led to the selection of the present townsite for Inuvik. Following educational leave in 1956-58, he participated in permafrost studies during the development of the new town of Thompson in northern Manitoba (1959-60). Between 1962 and

Roger Brown a rendu l'âme dans un hôpital d'Ottawa (Ontario), le 4 novembre 1980, au terme d'une longue lutte contre le cancer. Pendant près de dix ans, il était arrivé, grâce à son courage et à sa détermination, à mener une vie pleine et active. Son état s'était cependant graduellement détérioré surtout au cours des 12 derniers mois et, en dépit de sa force de caractère et son désir de vivre, il a finalement succombé à la maladie. Roger était reconnu comme une autorité en matière de répartition du pergélisol au Canada et, au fil des ans, son travail lui a permis de nouer de solides amitiés. Sa disparition se fera cruellement sentir chez ses collègues et ses nombreux amis partout dans le monde.

Né à Toronto (Ontario) le 17 janvier 1931, Roger Brown a obtenu son baccalauréat et sa maîtrise en géographie de l'Université de Toronto en 1952 et en 1954 respectivement. De septembre 1956 à juillet 1957, il a suivi des cours de doctorat à l'Université Clark de Worcester au Massachusetts (États-Unis). De septembre 1957 à août 1958, il a étudié au Scott Polar Research Institute de Cambridge en Angleterre, pour préparer sa thèse intitulée: "Permafrost in Canada — Its Effect on Developments in an Area of Marginal Human Activity". En juin 1961, l'Université Clark lui a décerné un doctorat en géographie.

Au cours de l'été de 1950 et de 1952, il a travaillé sur le terrain et dans un bureau en qualité d'adjoint stagiaire pour la Direction générale de la géographie du ministère des Mines et des Relevés techniques à Ottawa. En août 1951, il a navigué à bord du brise-glace U.S.S. *Eastwind*, à titre d'observateur canadien accompagnant la mission de réapprovisionnement des stations météorologiques de l'Arctique (Opération NANOOK 51 de la marine des États-Unis).

En juin 1953, sitôt engagé par la Division des recherches sur le bâtiment du Conseil national de recherches du Canada, il commençait des études visant à déterminer la répartition du pergélisol au Canada et à analyser les facteurs climatiques et les facteurs de terrain qui influent sur sa formation et sa stabilité. Vouant sa carrière à l'étude du pergélisol, il s'est livré à des études de prospection et à des études approfondies sur le terrain dans toutes les régions à pergélisol du Canada. En 1954, il était membre de l'équipe qui, pendant environ sept mois, a fait des études dans la région du delta du Mackenzie pour déterminer l'emplacement actuel de la ville d'Inuvik. Après avoir pris un congé d'éducation de 1956 à 1958, il a collaboré en 1959 et 1960 aux études sur le pergélisol qui ont précédé l'implantation de la nou-

1968 he conducted field work to delineate the southern boundary of permafrost in Canada and its occurrence and distribution in the discontinuous zone. During this period, surveys were made on foot and by car, canoe, train, fixed-wing aircraft, and helicopter across Canada from the Yukon and northern British Columbia in the west to Québec and Labrador in the east.

In 1969 he initiated studies in other parts of the Canadian permafrost region. Observations on the climate, terrain, and ground thermal regime were begun at various locations in northern Manitoba, the District of Keewatin, N.W.T., the Yellowknife area, and at Schefferville, Québec. Much of this work was directed toward gathering information on permafrost conditions in the vicinity of the boundary between the continuous and discontinuous permafrost zones. In the early 1970's, similar work was begun on alpine permafrost in the Canadian Cordillera, the Gaspé and Labrador. He also undertook studies in the High Arctic to investigate the nature and distribution of permafrost in the northern part of the continuous zone. In 1970-73 he carried out field work on Devon Island as part of the Tundra Biome project of the International Biological Program. The measurement of permafrost temperatures at Alert on the northern tip of Ellesmere Island was begun in 1978 in collaboration with the Geological Survey of Canada and the Department of National Defence.

Roger was the author or co-author of more than 45 scientific and technical papers. In 1967 he prepared the Permafrost Map of Canada, published jointly by the National Research Council of Canada and Geological Survey of Canada. In 1974 a modified version of this map was published in the National Atlas of Canada, Fourth Edition, and in 1978 a revised edition was included in the Hydrological Atlas of Canada. These maps together with the regional reports of his field surveys form the standard references for the distribution of permafrost in Canada. Much of the information he gathered during his early years at the Division of Building Research and for his Ph.D. thesis was published in 1970 by the University of Toronto Press in a book entitled *Permafrost in Canada — Its Influence on Northern Development*. The maps, the book, and his papers represent not only the remarkable achievements of one man but also a tremendous contribution to the knowledge of permafrost in Canada, which is vital in the planning and development of the natural resources and the communities of northern Canada. He also recognized the importance of permafrost research in other countries, particularly the Soviet Union, and he studied and became quite proficient in reading the Russian

ville de Thompson au nord du Manitoba. De 1962 à 1968, il a travaillé sur le terrain afin de déterminer la frontière sud du pergélisol au Canada et sa répartition dans la zone discontinue. Au cours de cette période, il a traversé le Canada d'ouest en est à pied, en auto, en canot, en train, en avion et en hélicoptère, depuis le Yukon et le Nord de la Colombie-Britannique jusqu'au Québec et au Labrador.

En 1969, il a entrepris des études dans d'autres parties des régions à pergélisol du Canada. En divers endroits, dans le nord du Manitoba, dans le district de Keewatin, dans les Territoires du Nord-Ouest, dans la région de Yellowknife et à Schefferville au Québec, il a effectué des observations sur le climat, le terrain et le cycle thermique du sol. Une bonne partie de son travail consistait à rassembler des renseignements sur l'état du pergélisol aux environs de la frontière qui sépare les zones à pergélisol continu et discontinu. Au début des années 1970, il a effectué des études similaires sur le pergélisol alpin de la cordillère canadienne, de la Gaspésie et du Labrador. En outre, il s'est rendu en extrême Arctique afin d'étudier la nature et la répartition du pergélisol dans la partie septentrionale de la zone continue.

De 1970 à 1973, il a travaillé à l'Île Devon au projet d'étude du biome de la toundra entrepris dans le cadre du Programme Biologique International. En collaboration avec la Commission géologique du Canada et le ministère de la Défense nationale, il a entrepris en 1978 de mesurer les températures du pergélisol à Alert, à l'extrémité nord de l'île d'Ellesmere.

Roger a été l'auteur ou le co-auteur de plus de 45 articles scientifiques et techniques. En 1967, il a préparé la carte du pergélisol du Canada, publiée conjointement par le Conseil national de recherches du Canada et la Commission géologique du Canada. Une version modifiée de cette carte a été publiée en 1974 dans la quatrième édition de l'Atlas national du Canada et, en 1978, une édition revue et corrigée paraissait dans l'Atlas hydrologique du Canada. Ces cartes, ainsi que les rapports régionaux de ses études sur le terrain, sont les documents de référence courants en ce qui a trait à la répartition du pergélisol au Canada. Une bonne partie des renseignements qu'il a rassemblés au début de sa carrière, lorsqu'il travaillait à la Division des recherches sur le bâtiment et qu'il préparait sa thèse de doctorat, a été fondue en un livre publié en 1970 par les Presses de l'Université de Toronto sous le titre: *Permafrost in Canada — Its Influence on Northern Development*. Ces cartes, ce livre ainsi que les articles qu'il a rédigés, non seulement témoignent des réalisations remarquables de l'homme, mais constituent aussi une contribution fort importante à la connaissance du pergélisol, élément essentiel dans la mise en valeur des ressources naturelles et l'implantation des communautés du nord du Canada. Comprenant l'importance des

language. Thus he was able to translate into English a number of important Russian permafrost publications, and edited the English translations of numerous Russian papers.

In addition to his extensive permafrost research activities at the Division of Building Research, Roger was an active member of several national and international committees and organizations concerned primarily with permafrost and periglacial phenomena and the North. He was perhaps best known as the Research Advisor and Secretary to the Permafrost Subcommittee of the NRCC, Associate Committee on Geotechnical Research, a position he held from 1960 when the Subcommittee was established. In this role he was the guiding force in organizing three major Canadian permafrost conferences (and at the time of his death he was involved with the Fourth, to be held in Calgary in March 1981) and several special permafrost seminars and symposia. Roger was also active in the planning of the First and Second International Conferences on Permafrost held at Lafayette, Indiana, USA in 1963 and at Yakutsk, USSR in 1973, respectively. Under his leadership as Chairman of the Organizing Committee, the Third International Conference on Permafrost was held in Edmonton, Alberta in 1978.

Over the years, Roger was asked to serve on the executive or on special Task Forces or Study Groups of many committees, including the NRCC Associate Committee on Quaternary Research (1966–72), the Canadian National Advisory Committee on Geographical Research (1970, 1971), the Canadian Advisory Committee on Remote Sensing (1972–75), the Committee on Permafrost, Polar Research Board, U.S. National Academy of Sciences (1972–80), and the Coordinating Committee for Periglacial Research, International Geographical Union (1974–80). He was a member of the six-man official delegation that represented Canada at the VII International Congress of the International Association for Quaternary Research (INQUA) held at Boulder, Colorado, USA in 1965. Roger also served on the NRCC Editorial Board for translation of the USSR Academy of Sciences journal *Problems of the North* (1965–80, Chairman 1972–80) and on the Editorial Board for the USA journal *Polar Geography and Geology* (1976–80).

Roger was a member of the Canadian Association of Geographers for many years and a member of the Arctic Circle (Ottawa), serving as President of the latter organization in 1969 and 1970. He was a Fellow of the Arctic Institute of North America and was a member of the Board of Governors from 1970 to 1975.

recherches sur le pergélisol effectuées dans d'autres pays, particulièrement en Union Soviétique, il s'est mis à l'étude du russe qu'il a fini par être capable de lire assez bien. C'est ainsi qu'il a traduit en anglais un certain nombre de publications importantes sur le pergélisol et révisé la traduction anglaise de nombreux articles écrits en russe. Outre qu'il menait des recherches approfondies à la Division des recherches sur le bâtiment, Roger était membre actif de plusieurs comités et organismes nationaux et internationaux voués à l'étude du pergélisol, des phénomènes périglaciaires et nordiques. Il était peut-être mieux connu en sa qualité de conseiller en recherches et secrétaire du Sous-comité du pergélisol du Comité associé de la recherche géotechnique du CNRC, poste qu'il a occupé depuis 1960, année de la création de ce sous-comité. À ce titre, il a présidé à l'organisation de trois importantes conférences canadiennes sur le pergélisol (et, au moment de son décès, il travaillait à organiser la quatrième conférence qui doit avoir lieu en mars 1981 à Calgary) ainsi que de plusieurs séminaires et colloques spéciaux sur le pergélisol. Roger a aussi participé à la planification de la première et de la seconde conférences internationales sur le pergélisol qui ont eu lieu respectivement à Lafayette dans l'Indiana (États-Unis) en 1963, et à Yakutsk (U.R.S.S.) en 1973. Il a présidé le comité organisateur de la troisième conférence internationale sur le pergélisol qui a eu lieu à Edmonton (Alberta) en 1978.

Au fil des ans, Roger a fait partie du bureau ou des groupes de travail ou d'étude spéciaux de nombreux comités, y compris le comité associé de la recherche sur le quaternaire du CNRC (1966–1972), le conseil consultatif national du Canada sur la recherche géographique (1970–1971), le conseil consultatif canadien sur la télédétection (1972–1975), le comité du pergélisol du Polar Research Board de la National Academy of Sciences des États-Unis (1972–1980), et le comité de coordination de la recherche périglaciaire de l'Union géographique internationale (1974–1980). Il a fait partie de la délégation officielle de six membres qui a représenté le Canada au septième congrès international de l'*International Association for Quaternary Research* (INQUA), qui a eu lieu à Boulder au Colorado (États-Unis) en 1965. Il a aussi été membre (de 1965 à 1980, et président de 1972 à 1980) du comité de rédaction du CNRC chargé de traduire la revue de l'académie des sciences de l'U.R.S.S. intitulée: "Problems of the North", et du comité de rédaction de la revue américaine intitulée: "Polar Geography and Geology" (1976–1980).

Roger a été membre de l'Association canadienne des géographes pendant de nombreuses années, ainsi que de l'*Arctic Circle* d'Ottawa, dont il a été le président en 1969 et en 1970. En outre, il était membre de l'Institut arctique de l'Amérique du Nord, faisant partie de son comité de direction de 1970 à 1975.

Due in no small part to his efforts, strong links were forged with permafrost workers throughout the world, notably, in the USA, USSR, People's Republic of China, France, Poland, England, Denmark, Finland, and Iceland. The close contacts established were maintained not only through his participation at meetings and conferences but also by personal visits to many of the permafrost areas of the northern hemisphere.

In a personal vein, the writer, on numerous occasions in the past 27 years, had the good fortune to spend many days and weeks on field work with Roger in northern Canada and on visits abroad — one could not wish for a more personable, interesting, and entertaining travelling companion. As an example, the writer accompanied Roger, following a period in northern Finland, on an eventful and very interesting two-month visit to the Soviet Union in 1966 including about six weeks in eastern Siberia. Another memorable trip was one we made in 1973, accompanied by our wives, through China and Mongolia by train (with a stop to make contacts in Peking) to attend the Second International Permafrost Conference in Yakutsk, USSR. On several occasions Roger was involved with arranging visit programs in Canada for permafrost workers from other countries. In 1975 he chaired a committee that arranged a three-week visit of a Chinese delegation to Canada and in 1977 he led a Canadian permafrost delegation to China for three weeks.

Permafrost underlies about one-half of Canada and Roger was keenly aware of its importance to the efficient and effective development, with due regard for environmental concerns, of our northern areas. He therefore was very active in furthering the scientific and public knowledge of permafrost in Canada. He gave courses on permafrost at the Universities of Calgary and Ottawa and innumerable lectures and seminars across Canada. Because of his reputation as an authority on permafrost distribution in Canada, he received numerous phone calls and a constant stream of visitors to his office asking for information and advice, which he willingly gave. It is safe to say that most, if not all, the permafrost workers in Canada (and many from other lands) were in contact with Roger Brown at one time or another and benefitted from or were influenced by his dedication, knowledge, and enthusiasm. In 1977, Roger was awarded the Silver Jubilee Medal and in late September 1980 (five weeks before his death) he received in person, at the annual Canadian Geotechnical Conference in Calgary, the R.F. Legget Award of the Canadian Geotechnical Society. This was a fitting tribute recognizing the significant achievements and contributions he had made to Canada in the geotechnical field.

C'est en grande partie grâce à lui que les spécialistes du pergélisol à travers le monde, particulièrement ceux des États-Unis, de l'U.R.S.S., de la République populaire de Chine, de la France, de la Pologne, de l'Angleterre, du Danemark, de la Finlande et de l'Islande, ont pu établir entre eux des liens étroits. Il cultivait ces relations non seulement en participant à des réunions et à des conférences, mais aussi en se rendant dans bien des régions à pergélisol de l'hémisphère septentrional.

En ce qui me concerne, j'ai souvent eu la chance, au cours des 27 dernières années, de travailler avec Roger pendant des jours et des mois dans le nord du Canada et à l'étranger et je peux témoigner du fait que nul ne pourrait souhaiter un compagnon de voyage plus agréable, plus intéressant et plus divertissant. Par exemple, à la suite d'un séjour dans le nord de la Finlande en 1966, j'ai fait avec lui un voyage mouvementé et très intéressant de deux mois en Union soviétique, au cours duquel nous avons passé environ 6 semaines dans l'est de la Sibérie. Nous fîmes un autre voyage mémorable en 1973, cette fois en compagnie de nos épouses, traversant la Chine et la Mongolie par train, avec arrêt à Pékin, pour nous rendre à la deuxième conférence internationale sur le pergélisol, à Yakutsk (U.R.S.S.). Roger a maintes fois participé à l'organisation de visites du Canada à l'intention de spécialistes étrangers du pergélisol. Ainsi, il présida en 1975 un comité chargé d'organiser une visite de trois semaines pour une délégation chinoise, avant d'être chef de mission, en 1977, d'une délégation canadienne qui passa trois semaines en Chine pour étudier le pergélisol.

Le pergélisol constitue la base d'environ la moitié de la superficie du Canada et Roger en avait bien saisi toute l'incidence sur le succès de l'aménagement de nos régions septentrionales en tenant compte, comme il se doit, des facteurs écologiques. C'est pourquoi il a tant fait pour promouvoir l'étude scientifique du pergélisol au Canada et intéresser le public à la question. Il a donné des cours en la matière à l'Université de Calgary et à l'Université d'Ottawa, prononçant en outre d'innombrables allocutions et animant autant de séminaires dans tout le Canada. À titre d'autorité en matière de répartition du pergélisol au Canada, on l'appelait ou on se rendait constamment à son bureau en quête d'informations et de conseils, qu'il prodiguait d'ailleurs avec largesse. On ne risque pas de se tromper en affirmant que la majorité, sinon la totalité, des spécialistes du pergélisol au Canada (sans compter ceux des autres pays) ont été en contact avec lui à un moment ou à un autre pour tirer profit ou s'inspirer de son dévouement, de ses connaissances et de son enthousiasme. Roger se vit décerner en 1977 la Médaille commémorative du 25^e anniversaire du couronnement de la Reine et à la fin de septembre 1980, cinq semaines avant sa mort, il recevait en personne le

Roger Brown was a man of many facets, having a wide sphere of interests outside his professional field. He did not hesitate to express his thoughts and opinions on many subjects — with refreshing candour coupled with wit and humour. His tales of field trip experiences were always related with great gusto and appropriate descriptive expressions — as were his views on politics, the economy, sports, and even individuals. Roger came from a close-knit family which was very conscious of the history of our country and which had a strong sense of public service. He was concerned about his community, he was knowledgeable about world affairs, he enjoyed the arts, and he had a keen interest in several sports — particularly hockey, football, and skiing. From his youth he was fascinated by the land, particularly the North, its wilderness areas, its physiography and history, and it was perhaps this that led him to geography and to his career in permafrost research. He shared his interest and enthusiasm for the North not only with his colleagues and friends, but also with his wife Janet and their four children — Geoffrey, Carolyn, Sheila, and Margaret. Together they spent many holidays at the family summer home in the Lake of Bays District, north of Toronto, and together they visited many parts of Canada and the USA. In 1976, for example, they made a memorable trip with his brother and his family, from Ottawa by car (complete with tents and canoes) to Northern B.C. and the Yukon, and back. Not only did they travel extensively in Canada as a family, but holidays were also taken in such countries as Cuba, Norway, and Switzerland where they visited relatives or friends. Roger and Janet celebrated their 25th wedding anniversary on October 15, 1980 while he was in hospital.

Roger was dedicated to his profession and especially to his family. Many lasting friendships were established through his work and family associations — numerous are those who were made welcome and experienced the hospitality of the Browns' home. Roger Brown will long be remembered for his unique combination of scholarliness and warm personality, and his work and the many contributions he made during his short life span will endure for many years.

G. H. Johnston
Assistant Head
Geotechnical Section
National Research Council of Canada
Ottawa, Ontario, Canada
K1A 0R6

prix R.F. Legget de la Société canadienne de géotechnique à l'occasion de la conférence canadienne sur la géotechnique, à Calgary. Cet hommage lui était dû en reconnaissance de tout ce qu'il avait apporté au Canada dans ce domaine.

Sa spécialité mise à part, Roger Brown se distinguait par sa polyvalence. D'une franchise rafraîchissante, il ne se faisait pas prier pour donner son avis sur divers sujets, avec esprit et humour. Il relatait invariablement ses voyages d'exploration avec beaucoup d'enthousiasme, utilisant toujours le mot juste, tout comme lorsqu'il exprimait son opinion sur la politique, l'économie, les sports, et même les gens. Issu d'une famille très unie qui trouvait son inspiration dans l'histoire de notre pays et dont la conscience sociale était très développée, Roger s'intéressait à son milieu tout en s'avérant un fin observateur de la scène mondiale qui appréciait les arts et se passionnait pour les sports — en particulier le hockey, le football et le ski. Il fût fasciné très jeune par le pays et en particulier par le Nord, ses régions désertiques, sa physiographie et son histoire, ce qui explique peut-être son intérêt pour la géographie et sa carrière dans la recherche sur le pergélisol. Il partageait son intérêt et son enthousiasme pour le Nord non seulement avec ses collègues et ses amis, mais également avec sa femme Janet et leurs quatre enfants: Geoffrey, Carolyn, Sheila et Margaret. Nombreuses furent les vacances qu'ils passèrent ensemble à la résidence estivale de la famille dans le district du Lac des Baies, au nord de Toronto, et ils visitèrent ensemble bien des régions du Canada et des États-Unis. En 1976, par exemple, les familles de Roger Brown et de son frère effectuèrent ensemble un voyage mémorable en automobile (avec un attirail complet de tentes et de canots), partant d'Ottawa pour explorer le Nord de la Colombie-Britannique et le Yukon. Les explorations familiales ont d'ailleurs débordé le Canada, avec des visites à des parents et des amis à Cuba, en Norvège et en Suisse. Roger et Janet célébrèrent leur 25^e anniversaire de mariage le 15 octobre 1980 alors qu'il était hospitalisé.

Très engagé dans sa profession, Roger n'en a pas moins accordé une attention toute particulière à sa famille. Son travail et ses activités familiales lui ont permis de se faire de très bons amis qui ont été nombreux à profiter de l'hospitalité de son foyer. On se souviendra longtemps de l'érudition et de la chaleur exceptionnelles de Roger Brown, de son travail et de tout ce qu'il nous a apporté durant son court séjour parmi nous.

G.H. Johnston
Chef adjoint
Section de géotechnique
Conseil national de recherches du Canada
Ottawa (Ontario) Canada
K1A 0R6

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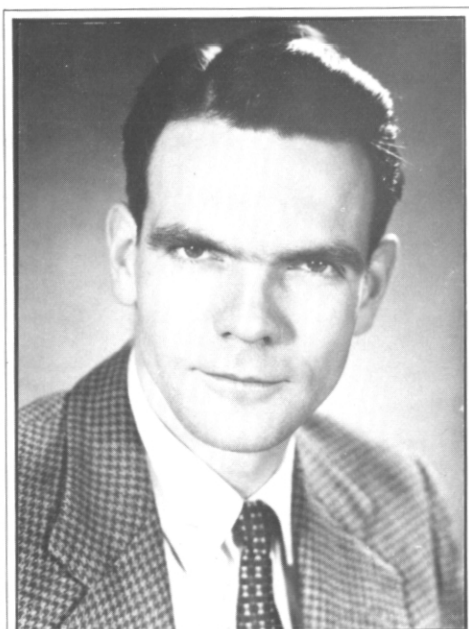
Some Highlights of Roger's Career.



JUST BACK FROM THE FIELD



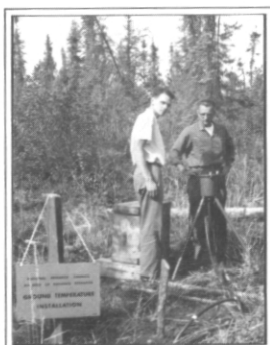
ON THE LECTURE CIRCUIT 1972



R.J.E. BROWN 1962



AT DBR/NRC FIELD STATION NORMAN WELLS, N.W.T. 1980
J.C. PLUNKETT, J.A. PIHLAINEN, R. CLARK



RJEB AND H.B. DICKENS NORMAN WELLS FIELD SITE 1960



ON TO THE NEXT PALS-A 3RD INTERNATIONAL PERMAFROST CONFERENCE
FIELD TRIP - NORTHERN MANITOBA 1978





AKLAVIK SURVEY 1954 K. BERRY, C.L. MERRILL, J.K. FRAZER, G.H. JOHNSTON



FIELD WORK MACKENZIE DELTA 1954



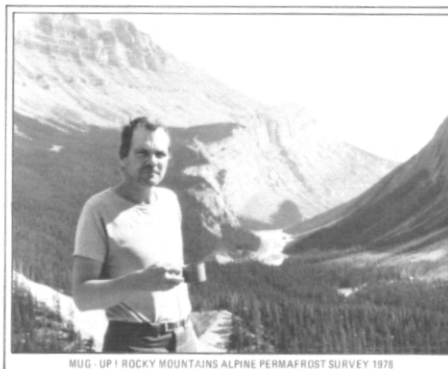
RJEB AND DRILL CREW MACKENZIE DELTA 1964



PERMAFROST SURVEY 1965 NORTHERN MANITOBA RJEB AND G.H. JOHNSTON



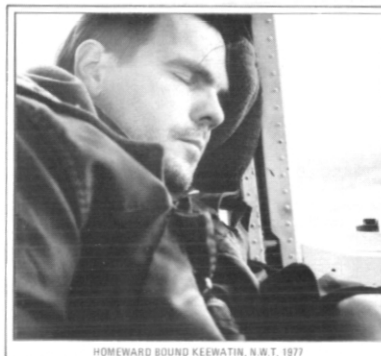
WE FOUND IT! FROZEN GROUND! PERMAFROST SURVEY KEEWATIN, N.W.T. 1976



MUG-UP! ROCKY MOUNTAINS ALPINE PERMAFROST SURVEY 1976



WINTER SURVEY KEEWATIN, N.W.T. 1978



HOMeward BOUND KEEWATIN, N.W.T. 1977



LUNCH STOP ALDAN RIVER, SIBERIA, U.S.S.R. 1966



MAGADAN HIGHWAY SIBERIA, U.S.S.R. 1966



RJEB AND G.H.J. ALDAN RIVER, SIBERIA, U.S.S.R. 1966



P.I. MELNIKOV, N.A. GRAVE, J. BROWN, S.S. VYALOV, TERRY JOHNSTON, RJEB AND JANET BROWN YAKUTSK CONFERENCE 1973



J.R. MACKAY, RJEB, G.H. JOHNSTON, L.W. GOLD, V. POPPE YAKUTSK CONFERENCE 1973



RJEB, JANET AND G.H. JOHNSTON TOUR PEKING, CHINA 1973



LUNCH STOP AT THE GREAT WALL CHINA 1973



WAITING TO BOARD THE ORIENT EXPRESS ULAN BATOR, MONGOLIA 1973



CANADIAN DELEGATION IN PEKING CHINA 1977 B. LADANYI, J. CLARK, RJEB, Y.A. SOUCY, N. MORGENSTERN, J. HUNTER, A. JUDGE, D. REID

