

INTERNATIONAL PERMAFROST ASSOCIATION

Newsletter No. 5 April 1989

This is the fifth Newsletter of the International Permafrost Association (IPA). Items for inclusion in the next Newsletter are welcomed - just send them to the Secretary-General.

V INTERNATIONAL CONFERENCE ON PERMAFROST

The Fifth International Conference, held at Trondheim in early August 1988 was a well deserved success. Draft minutes of the Council Meetings have already been sent to all member countries. Special thanks are due to our Norwegian hosts for the organization of the Conference and a superlative banquet.

NEXT COUNCIL MEETING

The next Council Meeting is planned for sometime about 6-10 June 1990, at Laval University, Quebec City, Canada, to coincide with the Fifth Canadian Permafrost Conference. Brochures on the Conference are enclosed. Mail correspondence relating to the Conference to:

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THE PRESIDENT'S COLUMN

After the successful Fifth International Conference on Permafrost in Trondheim, it was a privilege for my wife and I to visit a week with Professor Francesco Dramis in Italy. Francesco is the chairman of the adhering body of Italy and also secretary of the Mountain Permafrost Working Group. It was possible to spend a couple of days in central Appenines, near Camerino, looking at periglacial phenomenon. The Periglacial Working Group will be pleased to know that Dramis and associates are working with interesting deposit of late Wurm loess, complete with air-breathing mollusks. It was possible to go in the field and examine the loess with Francesco, Carlo Bisci, and Mauro Coltorti; **all from Camerino.**

Of great interest was a three day trip to the Italian Alps with Italian members of the Mountain Permafrost Working Group of IPA. Under the direction of Francesco Dramis we visited the high glaciers north of Bormio. Professor Claudio Smiragli of the University of Milan (who was at Trondheim meeting with us) showed us the moraines of the recent advances of the

glaciers, especially 1850 advance, and we became familiar with the rock glaciers now under study in the area. Professor Dramis has two students who are continuing investigations on a nearby rock glacier.

Ms. Manuela Pelfini, who is with the Department of Geosciences at the University of Milan, was gracious enough to point out her detailed work with lichen dating (Rhizocarpon geographicum). She is outlining the moraines of the 1850 glacial advance. Lichen studies may be of interest in rock glacier work, especially if the rock glaciers are no longer active and the clasts are stable.

We were hosted in the high mountains by members of the National Park Service who were able to take us to various most inaccessible places with jeeps (Fiats) with minimum hiking.

Of interest to all people working in various aspects of frozen ground is the establishment of a new permafrost journal. A note from Hugh French, Chairman of the Adhering Body from Canada, informs us that a new journal by Wiley entitled "Permafrost and Periglacial Processes", is about to get off the ground and go to press. It would appear that this journal would be of great interest to members of the IPA, and may afford an outlet for the papers presented at the symposia of Working Groups and others. Please contact Hugh about this for further information.

The president also attended the 39th Alaska Science Conference in Fairbanks, Alaska, actually it is now called the Arctic Science Conference. For almost 40 years this conference has been sponsored by what is now called the Arctic Division of the American Association for the Advancement of Science. There were very interesting papers on permafrost and I had the opportunity to speak on the program to enlighten people on the nature and the existence of the International Permafrost Association and the success of the Fifth Permafrost Conference.

In addition, the inaugural meeting of ARCUS, the Arctic Research Consortium of the United States, was in Fairbanks in October. ARCUS is a group of universities in the United States whose primary mission is to strengthen and advance Arctic research to meet national needs. About 15 or so universities were represented at the first annual meeting and perhaps about 30 universities will eventually be involved. Of interest to us is that the International Permafrost Association was an item on the agenda and I had a chance to inform the group of the nature of our organization, history, and our future plans. Obviously permafrost and seasonal frost are prime candidates as topics for researchers in the North. The president of the new organization is Luis Porenza, vice-chancellor for research at the University of Alaska-Fairbanks. A part-time executive secretary of ARCUS is currently located at the University of Colorado. It is hoped that an office in Washington D.C. can be opened in another year. Both formally and informally it was a chance to inform people about the activities of the International Permafrost Association.

Report by T.L. Péwé

STANDING COMMITTEES OF IPA

The following Standing Committees were approved at the Council Meeting 5 August 1988, Trondheim, Norway.

- a) Advisory Committee on Working Groups (Lovell, Chairman)
- b) Editorial Committee (Brown, Chairman)
- c) Finance Committee (French, Chairman)

WORKING GROUPS OF IPA

The following Working Groups were approved at the Council Meeting 5 August 1988, Trondheim, Norway.

- a) Mountain Permafrost (Haeberli, Chairman)
- b) Permafrost Terminology (van Everdingen, Chairman)
- c) Foundations (P.I. Melnikov, Chairman)
- d) Present Global Change and Permafrost (Koster, Chairman)
- e) Frost Action Environments (Lautridou, Chairman)
- f) Permafrost Data (Clark, Chairman)

WORKING GROUP ON PERIGLACIAL ENVIRONMENTS

The IPA Working Group on Periglacial Environments published its first Newsletter in April 1989. This Newsletter outlines the objectives of the Working Group and provides a summary of forthcoming meetings sponsored by, or of interest to, the Group. The Newsletter has been circulated to all corresponding members, but any IPA member who wishes to be included on the mailing list of the Periglacial Environments Working Group please write to the secretary:

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NEWS FROM MEMBER COUNTRIES

ARGENTINA

JOINT JAPANESE ARGENTINE EXPEDITION TO THE ANTARCTIC FOR THE STUDY OF PERMAFROST AT SEYMOUR ISLAND (MARAMBIO) DURING NOV 1987 - JAN 1988

The Japanese team was integrated as follows: Masami Fukuda, Low Temperature Science Institute, Hokkaido University, Sapporo, Japan. Michio Nogami, Tokyo Metropolitan University, Tokyo. Kuneo Omoto, Faculty of Science, C14 Laboratory Nihon University SITAGAJAZ Tokyo, and T. Koisumi, Tokyo Gokugei University.

The Argentine team was composed as follows: Arturo E. Corte, Laboratory of Geocryology, CRICYT Mendoza; Jorge Strellin, Instituto Antartico Buenos Aires and Faculty of Sciences University of Buenos Aires; Enrique M. Buk, and Luis Lenzano, Laboratory of Geocryology, CRICYT Mendoza. Field data is being analyzed and Joint report will be presented at a meeting which will be held in Tokyo next October. The following aspects will be treated in a joint report:

1. General Geology and Geomorphology;
2. Physical environment of the Island;
3. Geoelectrical surveys;
4. General Geocryology;
5. Geocryogenic forms;
6. Frost action eolian and fluvial processes;
7. Excavation sites at four areas in the Meseta and one in Larsen;
8. Geochemistry, accumulation of salts under the stones and C14 analysis and dating;
9. Discussion and summary.

Report by A. Corte

DENMARK

We are pleased to welcome Denmark as the newest member of our association. On 18 October 1988 Denmark applied for membership with the Danish Society for Arctic Technology (SAT) as the Adhering Body. SAT was established in 1985 with the objective of creating an interdisciplinary contact between individuals and companies with knowledge and interest in cold regions technology. SAT has 200 individual members and 35 company members.

The officers of SAT are as follows:

Chairman:	Mr. Gunnar P. Rosendahl, Director, Nuna-Tek (formerly Greenland Technical Organization, GTO)
Vice Chairman:	Mr. Henrik Mai, Managing Director, Arctic Consultant Group
Secretary General:	Mr. Thorkild Thomsen, M.Sc. Nuna-Tek Surveys.

The application of Denmark for membership was approved by mail ballot of Council Members and has been confirmed by a general meeting of SAT. The Board of SAT has approved that Denmark pay dues of \$250 per year in Group 3.

FRANCE

At the Council Meeting of 2 August 1988, France's application for membership was approved by unanimous vote. The IPA welcomes France as a member. The French Permafrost Association was formed on 22 April 1988. The Executive Committee is composed of:

J. Aguirre - Puente, President
J. Malaurie, Vice - President
J. P. Lautridou, Treasurer
A. M. Cames - Pintaux, Secretary

U.S.A.

The U.S. National Research Council has announced the new membership of the Committee on Permafrost. Members are Chairman Ted Vinson, Oregon State University; David Carter and Erk Reimnitz, U.S. Geological Survey; Chris Heuer, EXXON Production Research; Duane Miller, Miller Associates, Anchorage; Tom Osterkamp, University of Alaska; Don Hayley, EBA Engineering Consultants, Edmonton. The membership of the U.S. Committee/IPA remains the same: Brown (Chairman), Lovell (Vice-chairman), Gryc, Hopkins, Lunardini, and Tart. The Committee on Permafrost cosponsored with the American Society of Civil Engineers a workshop on Permafrost and Climate Change, February 6, 1989, in St. Paul, Minnesota, as part of the ASCE Fifth International Cold Regions Specialty Conference.

The Committee on Frost Action of the Transportation Research Board, U.S. National Research Council, held its annual meeting in Washington, D.C., January 23, 1989. David Esch, Alaska Department of Transportation, chaired the meeting which discussed the CRREL Frost's Effect Laboratory, frost heave test sites in Colorado, pavement damage during thawing, and research needs on soil stiffness, icing on paving materials, and frost heave models. The incoming chairman is Tom Kinney, University of Alaska.

The Working Group to form the International Arctic Science Committee met several times in late 1988 to prepare draft founding principles for the proposed Committee. The principles are under review in each of the eight founding countries. It is anticipated that the Committee will be formally organized in mid 1989. Other multi-national Arctic activities included the International Arctic Science Conference convened by the Soviet Academy of Sciences in Leningrad, December 12-15, 1988. Permafrost specialists met informally with P.I. Melnikov and V.P. Melnikov.

Report by J. Brown

OTHER ITEMS

GLOBAL CHANGE CONFERENCE

An international conference on the role of polar regions in Global Change will be held 11-15 June 1990, Fairbanks, Alaska, U.S.A. For further information, contact Dr. Gunter Weller, Chairman, Polar Research Board, National Academy of Sciences, 2101 Constitution Avenue, Washington, D.C. 20418, U.S.A., Tel. (202) 334-3479 or c/o Geophysical Institute, University of Alaska Fairbanks, AK 99775-0800, U.S.A., Tel. (907) 474-7371, TELEX 35414.

INTERNATIONAL COMMISSION ON SNOW AND ICE (ICSI)

During its Vancouver Bureau Meeting (1987), ICSI decided to remain with 4 Divisions, replacing "Ground Ice" by "Ice as a Material". Nevertheless, ICSI wishes to reinforce contacts with IPA. ICSI basically feels that official contacts should be established by mutual representatives being sent to each others meetings, and that direct collaboration should take place at the level of working groups. The three National ICSI-Working Groups on Ground Ice were disbanded, mainly because it was felt that they are not in the spirit of ICSI which is international and not national. On the other hand, the new ICSI Division "Ice as a material" (chairman: Dr. J. Klinger, DFVLR, P.O. Box 906058, D-5000 Köln 90, FRG) puts emphasis on investigations concerning ground ice on both Earth and Mars, and established, during its Paris Bureau Meeting (1988), a Working Group on Ground Ice. It is planned to held a symposium on terrestrial and extraterrestrial ground ice and ice sheets during the IUGG/IAHS General Assembly in Vienna 1991. It is the hope of ICSI and its Working Group on Ground Ice that IPA will be able to collaborate and thereby to strengthen the contacts between ice and permafrost specialists. I understand that Hugh French has now been appointed by the IPA Council to be the contact person to this working group from the side of IPA. The Vienna symposium is mainly aimed at the scientific preparation of possible Mars missions in the 1990's.

Extract from report by W. Haeberli

INTERNATIONAL COOPERATION IN ARCTIC SCIENCE

The Royal Swedish Academy of Sciences hosted a three-day meeting in Stockholm, March 24-26, 1988, to explore mechanisms for international cooperation for Arctic science. Twenty-nine scientists and science administrators from eight Arctic nations attended (Canada, Denmark/Greenland, Finland, Iceland, Norway, Sweden, the Soviet Union and the United States). It was agreed that an International Arctic Science Committee should be established to promote international cooperation and coordination of scientific research in the Arctic for the benefit of the peoples of the region and for the advancement of world scientific knowledge. The meeting was chaired by Professor Bert Bolin, of the University of Stockholm, and the following is adapted from a report of the meeting.

The proposed committee is intended to meet the increasing need for scientific knowledge from Arctic regions that is required for the wise development and management of those regions, as well as to ensure that Arctic research contributes fully to world science for the benefit of all mankind. It would serve as a body for international discussion and communication on science matters of international interest having to do with Arctic lands, seas, atmosphere and space, and as such would be a focal point for cooperation and interaction among Arctic scientists. The committee's scope would include both basic and applied research in all fields where international cooperation and coordination is desirable or necessary, including the natural and human sciences.

The committee would seek to determine priorities for Arctic research, increase the efficiency and effectiveness with which scientific resources and

facilities are used, improve the cooperation and exchange between scientists, and foster the linkage between different fields of study in the Arctic.

A working group was formed to prepare a proposal on how to organize the IASC. It was agreed that a secretariat should be formed and located in one of the Nordic countries. An invitation from the participants of the U.S.S.R. to hold a conference on Arctic Science Cooperation in the Soviet Union at the end of 1988 was gratefully received.

In addition to a list of specific projects, four research themes were identified for possible collaboration:

Deglaciation and the development of the Arctic terrestrial ecosystems during the Holocene, and the role of the Arctic in the carbon cycle with regard to both carbon dioxide and methane.

Atmospheric pollution in the Arctic region.

The circulation of the Arctic Sea, its ecosystem and its role for the heat budget of the northern hemisphere.

Man and his environment in the Arctic region.

It was emphasized that important bilateral and multinational research projects are being pursued in the Arctic. Such research will be continued by concerned parties, and in a longer time perspective it will be important to find the best means for interactions between different projects.

The workshop report is available from the Royal Swedish Academy of Sciences, Polar Research Committee, P.O. Box 50005, S-10405, Stockholm, Sweden. It is being distributed to international organizations having interests in Arctic research.

Reprint of a report, courtesy of J. Brown

NEW INTERNATIONAL JOURNAL

A new international journal, "Permafrost and Periglacial Processes" with Dr. H. M. French (University of Ottawa, Ottawa, Canada) as editor is to be published four times a year by J. Wiley and Sons Ltd., Chichester, United Kingdom. The journal is to be dedicated to the rapid publication of scientific and technical papers concerned with earth surface cryogenic processes, landforms, and sediments present in a variety of Arctic, Antarctic and High Mountain Environments.

INTERNATIONAL SYMPOSIA ON GROUND FREEZING (ISGF)

- 1) The 6th International Symposium on Ground Freezing (ISGF '91) will be held in September 1991, Beijing, People's Republic of China. For further information please contact:

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- 2) There are two ISGF (International Symposia on Ground Freezing) Working Groups active.

Working Group 1: Testing Methods for Frozen Soils. This Working Group consists of 14 members. The present chairman/convenor is Frank Sayles, recently retired from CRREL, Hanover, NH, U.S.A. In 1986 the Working Group published "Classification and Laboratory Testing of Artificially Frozen Ground" in ASCE, Journal of Cold Regions Engineering.

Working Group 2: Mechanical and Thermal Design of Frozen Soil Structures. This Working Group consists of 15 members (Chairman: Hans L. Jessberger) The following topics are selected:

- preinvestigations
- site conditions
- thermal analysis
- stability and deformation analysis
- field monitoring

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- 3) The 7th ISFG '94 will be held in France in 1984.

Extract of report from H. Jessberger

PUBLICATIONS AVAILABLE

NORWAY

The price of the three (3) volumes of the Permafrost Proceedings, V International Conference, Trondheim, August 1988 is Norwegian Kroner 1600 (about U.S. 245). If paid for in advance, there will be no mailing charge.

The volumes may be ordered from:

Tapir Publishers
Vollabakken 15
7030 TRONDHEIM
NORWAY

or

Tapir Publishers
7079 FLATASEN
NORWAY

U.S.A.

Limited number of U.S. published permafrost volumes are still available:

- 1) Permafrost: A bibliography 1978-1982 (GD 14); 2) Permafrost bibliography update 1983-1987 (GD 21); 3) Proceedings: Permafrost Fourth International Conference, Volume 1 only, 1524 pp. Reports 1 & 2 are available for \$5.00 each from The World Data Center For Glaciology, Cires, University of Colorado, Boulder, Colorado, 80309, U.S.A. Volume (3) is available prepaid for \$45.00 from Bruce Molnia, U.S. Geological Survey, MS 917, Reston, VA 22092, U.S.A.

Report by J. Brown

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