

SELECTED BIBLIOGRAPHY - 1978

Arranged in the following categories:

1. Properties of snow and ice
2. Precipitation and accumulation
3. Snowpack measurement
4. Snowmelt
5. Streamflow
6. Lake and river ice
7. Highways and buildings
8. Soil water and frost
9. Remote sensing

1. PROPERTIES OF SNOW AND ICE

- Adams, W.A. and P.A. Flavelle, 1977. Low temperature adapted submersible spectrophotometers for use in floating ice research. Scientific Report #82. Inland Waters Directorate, Fisheries and Environment Canada. Ottawa.
- Anderson, E.A., 1976. A point energy and mass balance model of a snow cover. NOAA Technical Report NWS-19. U.S. Dept. of Commerce. Silver Spring, MD.
- Armstrong, B., et al., 1977. Avalanche Atlas, Ouray County, Colorado. Institute of Arctic and Alpine Research. University of Colorado.
- Armstrong, R., et al., 1976. Avalanche release and snow characteristics, San Juan Mountains, Colorado. Institute of Arctic and Alpine Research. University of Colorado.
- Braithwaite, R., 1976. On the relation between ablation and air temperature. Summary of the Intern. Polartagung, Zurich. 6-8.4.76.
- Braithwaite, R. and F. Muller, 1976. On the simulation of glacier melt using temperature data from remote weather stations. International Geography, Volume 2, Climatology, Hydrology, and Glaciology. Moscow.
- Colbeck, S.C., 1976. Effects of radiation penetration on snow melt hydrographs. CRREL Report 76-11. U.S. Army Cold Regions Research and Engineering Laboratory. Hanover, NH.
- Colbeck, S.C., 1976. An analysis of water flow into dry snow. Water Resources Research. Vol. 12, No. 3, p. 523-527.
- Colbeck, S.C., 1976. Water flow through veins in temperate ice. CRREL Report 76-6. U.S. Army Cold Regions Research and Engineering Laboratory. Hanover, NH.
- Colbeck, S.C., 1976. Thermodynamic deformation of wet snow. CRREL Report 76-44. U.S. Army Cold Regions Research and Engineering Laboratory. Hanover, NH.
- Colbeck, S.C., 1977. On measuring the water saturation and porosity of snow. Journal of Glaciology. In press.
- Colbeck, S.C., 1977. The principles of water flow through snow. Invited review for Advances in Hydrosience. Volume 11. In press.
- Colbeck, S.C., 1978. Compression of wet snow. CRREL Report. U.S. Army Cold Regions Research and Engineering Laboratory. Hanover, NH. In press.
- Colbeck, S.C., et al., 1977. Snow hydrology: current status and research needs. Submitted to Water Resources Research.

- Colbeck, S.C. and N. Parsinnen, 1977. Regelation and the deformation of wet snow. Accepted for the Symposium on Physics and Chemistry of Ice, September.
- Ebaugh, W.P. and D.R. DeWalle, 1977. Final report: Laboratory investigation of rainfall retention and transmission in fresh snow. Institute for Research, Land and Water Resources. Pennsylvania State University. University Park, PA.
- Ebaugh, W.P. and D.R. DeWalle, 1977. Retention and transmission of liquid water in fresh snow. Proceedings, Second Conference on Hydrometeorology. Toronto. American Meteorological Society.
- Hambrey, M.J. and F. Muller, 1977. Structures and ice deformation in the White Glacier, Axel Heiberg Island, N.W.T., Canada. Journal of Glaciology. In press.
- Kikuchi, K. and A.W. Hogan. Snow crystal observations at Amundsen-Scott South Pole Station, Antarctica. ASRC-SUNYA. Albany, NY.
- Miller, L. et al., 1976. Avalanche Atlas, San Juan County, Colorado. Institute of Arctic and Alpine Research. University of Colorado.
- Muller, F., 1976. On the thermal regime of a high Arctic valley glacier. Journal of Glaciology. Vol. 16, No. 74, p. 119-133.
- Muller, F. and A. Iken, 1973. Velocity fluctuations and water regime of Arctic valley glaciers. Symposium on the Hydrology of Glaciers, Cambridge, 7-13 September, 1969. International Association of Scientific Hydrology publication No. 95, p. 165-182.
- Muller, F., B. Stauffer and G. Schriber, 1975. Isotope measurements and firn stratigraphy on ice caps surrounding the North Water polynya. Proceedings of the International Symposium on Isotopes and Impurities in Snow and Ice, International Association of Hydrological Sciences. Grenoble.
- Munro, D.S. and J.A. Davies, 1977. An experimental study of the glacier boundary layer over melting ice. Journal of Glaciology. 17(80), 89-99.
- Munro, D.S. and J.A. Davies, 1976. Diurnal energy flux variations and glacier surface hydrology. International Geography. 2, 75-77. (Proceedings of the 23rd International Geographical Congress, Moscow).
- Tucker, W.B. and S.C. Colbeck, 1977. A computer routing of unsaturated flow through snow. CRREL Special Report 77-10. U.S. Army Cold Regions Research and Engineering Laboratory. Hanover, NH.
- Wankiewicz, A., 1976. Water percolation within a deep snowpack - field investigations at a site on Mount Seymour, British Columbia. Ph.D. Thesis, University of British Columbia.
- Young, G.J., 1976. An approach to glacier mass-balance analysis utilizing terrain characterization. Scientific Series No. 60. Inland Waters Directorate, Environment Canada. Ottawa.
- Young, G.J., 1977. Relations between mass-balance and meteorological variables on Peyto Glacier, Alberta 1967-1974. Presented at Symposium on Dynamics of Temperate Glaciers and Related Problems. Fourth European Geophysical Society Meeting. 6-9 September. Munich, Germany. Glaciology Division, Inland Waters Directorate, Fisheries and Environment Canada. Ottawa. 22 p.
- Young, G.J. and K.C. Arnold, 1977. Orthophotomaps of glaciers: an evaluation of an automated method applied to Peyto Glacier, Alberta. Presented at Symposium on Dynamics of Temperate Glaciers and Related Problems. Fourth European Geophysical Society Meeting. 6-9 September. Munich, Germany. Glaciology Division, Inland Waters Directorate, Fisheries and Environment Canada. Ottawa. 17 p.

Young, G.J. and A.D. Stanley, 1976. Canadian glaciers in the International Hydrological Decade Program, 1965-1974, No. 3. Ram River Glacier, Alberta - summary of measurements. Scientific Series No. 70. Inland Waters Directorate, Environment Canada. Ottawa. 56 p.

Young, G.J. and A.D. Stanley, 1976. Canadian glaciers in the International Hydrological Decade Program, 1965-1974, No. 4. Peyto Glacier, Alberta - summary of measurements. Scientific Series No. 71. Inland Waters Directorate, Fisheries and Environment Canada. Ottawa. 70 p.

2. PRECIPITATION AND ACCUMULATION

Adams, W.P., 1976. Areal differentiation of snowcover in East Central Ontario. Water Resources Research. 12,6, 1226-1234.

Anderson, E.A., R.Z. Whipkey, H.J. Greenan, and C.T. Machell, 1977. NOAA-ARS Cooperative Snow Research Project - Watershed hydro-climatology and data for water years 1960-1974. National Weather Service, NOAA. Silver Spring, MD.

Bilello, M.A., 1976. Snow and ice conditions and winter temperatures in the East Kootenai basin, British Columbia, Canada. Paper presented at the 25th Meeting of the Canadian Association of Geographers.

Bilello, M.A., 1976. A study of climatic elements occurring concurrently. Paper presented at the 23rd International Geographical Congress.

Bilello, M.A., 1978. Analysis of the mid-winter regime and snow occurrence in Germany. In preparation.

Bilello, M.A. and R. Bates, 1976. Climatic analysis for defining the cold regions of the northern hemisphere. Paper presented at the 37th Military Operations Research Symposium.

Bilello, M.A., C. Langway and S. Mock, 1975. A summary of weather observed at Crete and Summit Stations, Greenland, June 1974. CRREL Special Report 244. U.S. Army Cold Regions Research and Engineering Laboratory. Hanover, NH.

Bureau of Reclamation, 1977. Generalized criteria for seeding winter orographic clouds, Monography No. 1. U.S. Department of the Interior.

Bureau of Reclamation, 1977. Final environmental statement, Project Skywater, A program of research in precipitation management. Vol. I-III. U.S. Department of the Interior.

Dewey, K.F., 1977. Lake-effect snowfall in Buffalo, New York and a look at the record breaking 1976-77 snowfall season. National Weather Digest. Vol. 2, No. 3.

Dewey, K.F., 1977. Lake-effect snowstorms and the record breaking 1976-77 snowfall to the lee of Lakes Erie and Ontario. Weatherwise. Vol. 30.

Goodison, B.E., 1977. Snowfall and snow cover in southern Ontario: principles and techniques of assessment. Ph.D. Thesis. University of Toronto. 403 p.

Hendrick, R.L. and R.J. DeAngalis, 1976. Seasonal snow accumulation, melt, and water input - A New England model. Journal of Applied Meteorology. Vol. 15, No. 7, p. 717-727.

Hogan, A.W. Collection of drifting snow by a track roughened surface. ASRC-SUNYA. Albany, NY.

Hogan, A.W. Summer ice crystal precipitation at the South Pole. ASRC-SUNYA. Albany, NY.

Hornbeck, J.W., G.E. Likens and J.E. Eaton, 1977. Seasonal patterns in acidity of precipitation and their implications for forest-stream ecosystems. Water, Air, and Soil Pollution. 7:355-365.

Linsley, R.K., N.H. Crawford and B.A. Kraeger, 1977. Runoff increase from precipitation augmentation in basins with seasonal snowpacks. Proceedings of Water Management for Irrigation and Drainage. ASCE. 20-22 July. Reno, NV.

Muller, F. and K. Schroff, 1976. Experience with three types of automatic climatological recording stations in remote areas. COST 72 Technical Conference on Automatic Stations. Reading. 22-24.9.76.

Schriber, G., B. Stauffer and F. Muller, 1975. $^{18}\text{O}/^{16}\text{O}$ and ^3H -measurements on precipitation and air moisture samples from the North Water area. Proceedings of the International Symposium on Isotopes and Impurities in Snow and Ice. International Association of Hydrological Sciences. Grenoble.

Service de la Météorologie, 1977. Relèvements nivométriques. Gouvernement du Québec.

Slaughter, C. and M.A. Bilello, 1977. Kolma water balance station, Magadan Oblast, Northeast USSR. CRREL Special Report 77-15. U.S. Army Cold Regions Research and Engineering Laboratory. Hanover, NH.

3. SNOWPACK MEASUREMENT

Adams, W.P., 1976. Limitations of the bulk density method of snow course measurement and the need for more detailed snow data. Journal of Soil and Water Conservation. Vol. 32, No. 3, p. 135-137.

Colbeck, S.C., 1976. On the use of tensiometers in snow hydrology. Journal of Glaciology. Vol. 17, No. 75, p. 135-140.

DeVenney, J.G. Average water equivalent of snowpack in New Brunswick and the Saint John River basin.

Dickison, R.B.B. and D.A. Daugharty, 1977. Effects of forest cover and topography on snow cover in the Nashwaak Experimental Watershed Project. Preprint volume: Second Conference on Hydrometeorology. 25-27 October. Toronto. American Meteorological Society.

Goodison, B.E., 1977. Accuracy of Canadian snow gauge measurements. Proceedings, Second Conference on Hydrometeorology. 25-27 October. Toronto. American Meteorological Society.

Young, G.J., 1976. A portable profiling snow gauge - results on field tests on glaciers. Paper presented at the Western Snow Conference. 20-22 April. Calgary, Alberta. Glaciology Division, Fisheries and Environment Canada.

4. SNOWMELT

Colbeck, S.C., 1978. Short term forecasting of water runoff from snow and ice. Invited review paper for the Symposium of Applied Glaciology. Journal of Glaciology. In press.

Dunne, T., A.G. Price and S.C. Colbeck, 1976. The generation of runoff from sub-arctic snowpacks. Water Resources Research. Vol. 12, No. 4, p. 677-685.

Price, A.G., T. Dunne and S.C. Colbeck, 1976. Energy balance and runoff from a subarctic snowpack. CRREL Report 76-27. U.S. Army Cold Regions Research and Engineering Laboratory. Hanover, NH.

Weisman, R.N., 1977. Snowmelt: A two-dimensional turbulent diffusion model. Water Resources Research. 13(2), 337-342.

5. STREAMFLOW

Lawson, D.W., C. Guillard, J. Cerceau, G. Brown, and J.M. Power, 1977. Developing a flood forecasting system for the Ottawa River. Second Conference on Hydro-meteorology. 25-27 October. Toronto. American Meteorological Society/Canadian Meteorological Society.

Lawson, D.W. and S.Y. Shiau, 1977. Data requirements and reference documents for the SACRAMENTO Watershed Modelling system. Water Resources Branch, Environment Canada. Ottawa. 32 p.

Young, G.J., 1977. Glacier outburst floods. Paper presented at the Canadian Hydrology Symposium 77 - FLOODS, Edmonton, Alberta. 29-31 August. Glaciology Division, Inland Waters Directorate, Fisheries and Environment Canada.

Young, G.J., 1977. The seasonal and diurnal regime of a glacier-fed stream; Peyto Glacier, Alberta. Paper presented at the Alberta Watershed Research Program Symposium. 31 August- 2 September. Edmonton, Alberta. Glaciology Division, Inland Waters Directorate, Fisheries and Environment Canada.

Young, G.J. and Glaciology Division, 1977. Report on the influence of glaciers on the hydrology of streams affecting the proposed Alcan Pipeline route. Submitted to Inland Waters Directorate Pacific Region, Fisheries and Environment Canada. Vancouver, B.C.

6. LAKE AND RIVER ICE

Adams, W.A., 1977. Effects of ice cover on the solar radiation regime in Canadian lakes. (XX Congress S.I.L., Copenhagen). Vech. Int. Ver. Limnol. In press.

Adams, W.P., 1976. Field determination of the densities of lake ice sheets. Limnology and Oceanography. 21, 4, 663-668.

Adams, W.P., 1976. Observations on the diversity of lake cover and on some implications of that diversity. The Musk-Ox. 18, 86-99.

Adams, W.P., 1976. A classification of process and form for freshwater ice. The Musk-Ox. 18, 99-111.

Adams, W.P., 1977. Iced lakes. The Geographic Magazine. March, 372-375.

Adams, W.P., 1977. How spring breakups alter shorelines. Canadian Geographical Journal. 94, 2, 62-65.

Bilello, M.A., 1977. Ice decay patterns on a lake, a river, and a coastal bay in Canada. Paper presented at Canadian Association of Geographers Annual Meeting.

Bilello, M.A., 1977. Decay patterns of land-fast sea ice in Canada and Alaska. CRREL Internal Report 510. Paper presented at ICSI/AIDJEX Symposium on Sea Ice Process and Models.

Catchpole, A.J.W., D.W. Moodie and D. Milton, 1977. Spring breakup of estuaries on Hudson Bay. Weather. XXXII (10):364-372.

Davies, T.D., P. Brimblecombe and C.E. Vincent, 1977. The first ice core from East Africa. *Weather*. XXXII (10):386-390.

Hanley, T. O'D. and B. Michel, 1977. Laboratory formation of border ice and frazil slush. *Canadian Journal of Civil Engineering*. Vol. 4, No. 2, p. 153-160.

7. HIGHWAYS AND BUILDINGS

Colbeck, S.C., 1977. Roof loads resulting from rain-on-snow. CRREL Report 77-12. U.S. Army Cold Regions Research and Engineering Laboratory. Hanover, NH.

Colbeck, S.C., 1977. Roof loads resulting from rain-on-snow: results of a physical model. *Canadian Journal of Civil Engineering*. Vol. 4, No. 4.

Lorenzen, R.T., 1970. Observations of snow and wind loads precipitant to building failure in New York state 1969-70. Presented at North Atlantic Region Meeting, ASAE. 16-18 August. Newark, DE. American Society of Agricultural Engineers. Paper No. 70-305.

Lorenzen, R.T., 1970. Modes of structural failure of critical snow load. Presented at 1970 Winter Meeting of the American Society of Agricultural Engineers. December. Chicago, IL. American Society of Agricultural Engineers. Paper No. 70-920.

O'Rourke, M., 1976. Snow load case histories, 1975-76 and Snow load data analysis, 1975-76. Prepared for U.S. Army Cold Regions Research and Engineering Laboratory. Hanover, NH.

O'Rourke, M., 1977. Snow load case histories, 1976-77 and Snow load data analysis, 1976-77. Prepared for U.S. Army Cold Regions Research and Engineering Laboratory. Hanover, NH.

Taylor, D.A. and W.R. Schriever, 1977. Snow loads on arena-type roofs in Canada. Presented at the Canadian Society for Civil Engineering, Ontario Region Seminar - Restoration of existing buildings - arenas. 24 November. London, Ontario.

8. SOIL WATER AND FROST

Ohmura, A. and F. Muller, 1976. A review of heat balance studies on Arctic tundra and a proposal for the future. *Summary of the International Polartagung*. Zurich. 6.-8.4.76.

Ohmura, A. and F. Muller, 1976. Heat balance measurement on Arctic tundra (Axel Heiberg Island, Canadian Arctic Archipelago). *International Geography*, Vol. 2, Climatology, Hydrology, and Glaciology. Moscow.

9. REMOTE SENSING

Barnes, J.C. and C.J. Bowley, 1977. Study of near-infrared snow reflectance using Skylab S192 multispectral scanner data. *Environmental Research and Technology Final Report on NOAA Contract No. 6-35201*. (ERT Doc. No. 1474F). NOAA/NESS. Suitland, MD.

Eschner, A.R., T.M. Lillesand and D.E. Meisner, 1977. Satellite remote sensing of snowcover in the Adirondacks. *Final report on NOAA Grant No. 04-5-158-43*. NOAA/NESS. Suitland, MD.

- Ferguson, H.L. and S. Lapczak, 1977. Satellite imagery analysis of snow cover in the Saint John and Souris River basins. Proceedings, 4th Canadian Symposium on Remote Sensing. Quebec City.
- Hall, D.K. and M.L. Bryan, 1977. Multispectral remote observations of hydrologic features on the North Slope of Alaska. Goddard Space Flight Center. X-913-77-124.
- Lawson, D.W., 1976. The application of remote sensing to water resources planning, watershed modelling, and real-time flood forecasting. Remote Sensing of Soil Moisture and Groundwater, Workshop Proceedings, Canadian Aeronautics and Space Institute. Toronto.
- Matson, M., 1976. Winter snow cover patterns in North America and Eurasia, 1975-1976. Proceedings of the NOAA Climate Diagnostics Workshop. 4-5 November. U.S. Department of Commerce. NOAA. Suitland, MD.
- Matson, M., 1977. Winter snow-cover maps of North America and Eurasia from satellite records, 1966-1976. NOAA Technical Memorandum NESS 84. NOAA/NESS. Suitland, MD.
- McMillan, M. and D.G. Forsyth, 1976. Satellite images of Lake Erie ice, January-March 1975. NOAA Technical Memorandum NESS 80. NOAA/NESS. Suitland, MD.
- Meisner, D.E., T.M. Lillesand and D.R. Eschner, 1977. Satellite remote sensing of snowcover in the Adirondacks. Proceedings, American Society of Photogrammetry, 43rd Annual Meeting. 27 February - 4 March. Washington, D.C.
- Merry, C.J. and H.L. McKim, 1977. Computer processing of Landsat digital data and sensor interface development for use in New England reservoir management. Final report under NASA Landsat-2 Follow-on Investigation #22510 - The Use of the Landsat Data Collection System (DCS) and Imagery in Reservoir Management and Operations. In press.
- Schneider, S.R., 1977. Operational satellite Assessment of snowcover and river ice in the Saint John Basin. Report to the WMO/WWN St. John Basin Pilot Project. NOAA/NESS. U.S. Department of Commerce. Washington, D.C.
- Schneider, S.R. and D.F. McGinnis, 1977. Spectral differences between VHRR and VISSR data and their impact on Environmental studies. Proceedings, American Society of Photogrammetry, 43rd Annual Meeting. 27 February - 4 March. Washington, D.C.
- Schneider, S.R., M.C. McMillan and D.R. Weisnet, 1976. River basin snow mapping at the National Environmental Satellite Services. NOAA Technical Memorandum NESS 83. NOAA/NESS. Washington, D.C.
- Weisnet, D.R. and M. Matson, 1976. A possible forecasting technique for winter snow cover in the Northern Hemisphere and Eurasia. Monthly Weather Review. 104, 828-835.