

GLACIOLOGICAL LITERATURE

This is a selected list of glaciological literature on the scientific study of snow and ice and of their effects on the earth; for the literature on polar expeditions, and also on the "applied" aspects of glaciology, such as snow ploughs, readers should consult the bibliographies in each issue of the *Polar Record*. For Russian material the system of transliteration used is that agreed by the U.S. Board on Geographic Names and the Permanent Committee on Geographical Names for British Official Use in 1947. Readers can greatly assist by sending reprints of their publications to the Society, or by informing Dr. J. W. Glen of publications of glaciological interest. It should be noted that the Society does not necessarily hold copies of the items in this list, and also that the Society does not possess facilities for microfilming or photocopying.

GENERAL GLACIOLOGY

- BENDER, J. A. Snow and ice. *Transactions. American Geophysical Union*, Vol. 44, No. 2, 1963, p. 585–88. [Survey of recent U.S. work on physical properties of snow and ice.]
- [JAPAN: GLACIOLOGICAL RESEARCH.] 1961–1962 nen fuyu seppyō kenkyū chōsa shiken no genkyō chōsa ni tsuite [General survey of research on snow and ice during winter of 1961–1962]. *Seppyō*, Vol. 24, No. 6, 1962, p. 11–34. [Survey of results of questionnaire on current work in Japan. English summary.]
- MANLEY, G. Glaciology in the last twenty-five years. *Geographical Magazine*, Vol. 35, No. 12, 1963, p. 729–38. [Review of recent developments.]
- TUSHINSKIY, G. K. *Ledniki, snezhniki, laviny Sovetskogo Soyuza* [Glaciers, snow patches and avalanches of the Soviet Union]. Moscow, Gosudarstvennoye Izdatel'stvo Geograficheskoy Literatury, 1963. 311 p. [General description.]

GLACIOLOGICAL INSTRUMENTS AND METHODS

- BARKOV, N. I. Bureniye glubokikh skvazhin v lednikovom pokrove metodom protaivaniya [Drilling deep holes in ice by the melting method]. *Informatsionnyy Byulleten' Sovetskoy Antarkticheskoy Ekspeditsii* [Information Bulletin of the Soviet Antarctic Expedition], No. 40, 1963, p. 39–42.
- EKMAN, S. R. Notes on glaciological activities in Kebnekajse, Sweden. Thermal drilling in Isfallsglaciären, Kebnekajse. *Geografiska Annaler*, Årg. 43, Ht. 3–4, 1961, p. 422. [Description of hotpoint and results obtained with it.]
- EVANS, S. Radio techniques for the measurement of ice thickness. *Polar Record*, Vol. 11, No. 73, 1963, p. 406–10. [Apparatus constructed at Scott Polar Research Institute, Cambridge, for operation in the field during 1963–64.]

PHYSICS OF ICE

- DUNITZ, J. D. Nature of orientational defects in ice. *Nature*, Vol. 197, No. 4870, 1963, p. 860–62. [Discussion of likelihood of defects arising from misplaced hydrogen atoms in ice.]
- HARRIS, F. S., jr., and others. Nucleation of ice on lead iodide, by F. S. Harris, Jr., D. C. Sparks and R. G. Layton. *Journal of Atmospheric Sciences*, Vol. 20, No. 2, 1963, p. 149–52. [Experiments reported.]
- HELMUTH, R. A. Capillary size restrictions on ice formation in hardened Portland cement pastes. *Research and Development Laboratory, Portland Cement Association. Research and Development Bulletin* 156, 1960, p. 855–69. [Theory of growth of ice in small pores and experiments to test it.]
- KNIGHT, C. A. Migration of liquid inclusions parallel to the *c*-axis in ice single crystals: an origin for some striations. *Canadian Journal of Physics*, Vol. 40, No. 11, 1962, p. 1681–82. [Laboratory study of movement of brine inclusions.]
- KRAUSZ, A. S. The creep of ice in bending. *Canadian Journal of Physics*, Vol. 41, No. 1, 1963, p. 167–77. [Laboratory tests, some of which show an anomalous initial acceleration of creep.]
- LATHAM, J. Electrification produced by the asymmetric rubbing of ice on ice. *British Journal of Applied Physics*, Vol. 14, No. 8, 1963, p. 488–90.
- LAVROV, V. V. Voprosy fiziki i mekhaniki l'da [Questions of the physics and mechanics of ice]. *Trudy Arkticheskogo i Antarkticheskogo Nauchno-Issledovatel'skogo Instituta* [Transactions of the Arctic and Antarctic Research Institute], Tom 247, 1962, 118 p. [Formation of ice, behaviour under stress, mechanical properties, considerations affecting its use in models; primarily concerned with floating ice.]
- LAYTON, R. G., and HARRIS, F. S., jr. Nucleation of ice on mica. *Journal of Atmospheric Sciences*, Vol. 20, No. 2, 1963, p. 142–48. [Microscopical study.]
- MAGONO, C., and TAKAHASHI, T. On the electrical phenomena during riming and glazing in natural supercooled cloud droplets. *Journal of the Meteorological Society of Japan*, Ser. 2, Vol. 41, No. 2, 1963, p. 71–81. [Field observations.]
- TAKAHASHI, T. Electric charge generation by breaking of ice piece. *Journal of the Meteorological Society of Japan*, Ser. 2, Vol. 40, No. 5, 1962, p. 277–86. [Laboratory measurements.]
- WATTS-TOBIN, R. J. Surface structure of water and ice. *Philosophical Magazine*, Eighth Ser., Vol. 8, No. 86, 1963, p. 333. [Criticism of paper of same title by N. H. Fletcher, *ibid.*, Vol. 7, No. 74, 1962, p. 255–69.]

LAND ICE. GLACIERS. ICE SHELVES.

- ANDERSEN, B. G. Preliminary report on glaciology and glacial geology of the Thiel Mountains, Antarctica. *U.S. Geological Survey. Professional Paper* 475-B, Article 37, 1963, p. B140–B143. [Lat. 85° S. to 85°30' S., long. 85° W. to 95° W.]

- BACKER, A. Av brevandringens saga. *Den Norske Turistforenings Årbok*, 1961, p. 35–54. [Historic survey of early crossings and climbings of glaciers by tourists in Norway, particularly William Cecil Slingsby at end of last century.]
- BAUER, A. Les glaciers de l'Île de Kerguelen. *CNFRA (Comité National Français pour les Recherches Antarctiques)*, No. 2, 1963, p. 1–75. (Territoire des Terres Australes et Antarctiques Françaises, campagne d'été 1961–1962. Groupe de Glaciologie.) [Description of 78 glaciers.]
- BELOQUIL, G. El ventisquero Moreno y la observación geológica. *Argentina Austral*, Año 33, No. 362, 1961, p. 21–23. [Summary of investigations of glacier, chiefly by Arnold Heim.]
- BENTLEY, C. R. Crustal studies in polar regions. *Transactions. American Geophysical Union*, Vol. 44, No. 2, 1963, p. 342–44. [Survey of recent U.S. work. Includes bedrock topography in Antarctica.]
- BJÖRNSSON, F. Fjallsárhlaupid 1962 og athuganir á lóninu í Breidamerkurfjalli. *Jökull*, Ár 12, 1962, p. 42–43. [*Jökullhlaup* in Fjallsá, south-east Iceland, 1962.]
- BRAY, J. R., and STRUIK, G. J. Forest growth and glacial chronology in eastern British Columbia, and their relation to recent climatic trends. *Canadian Journal of Botany*, Vol. 41, No. 8, 1963, p. 1245–71. [Mainly from field work on Yoho Glacier.]
- BROGAS, J., and DELWICHE, R. Cl, K and Na concentrations in Antarctic snow and ice. *Journal of Geophysical Research*, Vol. 68, No. 13, 1963, p. 3999–4000. [Results of measurements at "Roi Baudouin" station.]
- CASE, J. B. Glacier mapping in the western United States. *Ohio State University Research Foundation. Report 943-Final*, 1960, i, 11 leaves, maps (3 loose).
- EIDE, T. O. Jostedalsbreen. *Den Norske Turistforenings Årbok*, 1961, p. 61, 87–95. [Jostedalsbreen, west Norway: early exploration and travel.]
- FRISTRUP, B. Hvad ved vi om indlandsisen? *Grønland*, 1963, No. 2, p. 41–61. [Survey of latest research on Greenland Ice Sheet. English summary.]
- GIOVINETTO, M. B. Glaciological studies on the McMurdo–South Pole traverse, 1960–1961. *Ohio State University. Institute of Polar Studies. Report No. 7*, 1963, v, [74] p. [Estimate of mass accumulation.]
- GONFIANTINI, R., and others. Snow stratigraphy and oxygen isotope variations in the glaciological pit of King Baudouin Station, Queen Maud Land, Antarctica, by R. Gonfiantini, V. Togliatti, E. Tongiorgi, W. de Breuck and E. Picciotto. *Journal of Geophysical Research*, Vol. 68, No. 13, 1963, p. 3791–98.
- HAGENE, G. Kartlegging av breene. *Den Norske Turistforenings Årbok*, 1961, p. 159–69. [History of mapping of glaciers in Norway in connection with topographic surveys.]
- HAMILTON, W., and HAYES, P. T. Structure of lower Taylor Glacier, south Victoria Land, Antarctica. *U.S. Geological Survey. Professional Paper 424-C*, No. 224, 1961, p. 206–09.
- HARTSHORN, J. H. Evidence for local glacier stagnation in East Greenland. *U.S. Geological Survey. Professional Paper 424-C*, No. 227, 1961, p. 216–18. [Results of field work north of Scoresby Sund.]
- HEINE, A. J. Mount Ruapehu ice and snow photo survey. *New Zealand Journal of Geology and Geophysics*, Vol. 6, No. 2, 1963, p. 261–67. [System of photo survey points established to record autumn changes in glaciers and winter changes in snow cover.]
- KAZANSKIY, A. B. Teplovoy balans otkrytoy poverkhnosti l'da lednika Fedchenko [Thermal balance of an exposed ice surface on Lednik Fedchenko]. *Izvestiya Akademii Nauk SSSR. Seriya Geofizicheskaya [News of the Academy of Sciences of the U.S.S.R. Geophysical Series]*, 1960, No. 12, p. 1883–86.
- KINSMAN, D. J. J., and others. Glacial history of Beerenberg, Jan Mayen island, by D. J. J. Kinsman, J. W. Sheard and F. J. Fitch. *Nature*, Vol. 195, No. 4844, 1962, p. 897–98. [Comment on article by Fitch, "The University of London 1961 Beerenberg expedition", *Nature*, Vol. 194, No. 4829, 1962, p. 624–26.]
- KJERÚLF, TH. Vatnajökull hlaupinn. Frásögn thorvandar læknis Kjerúlfís 1890. *Jökull*, Ár 12, 1962, p. 47–48. [Eyewitness account of sudden advance of Brúarjökull, Vatnajökull, in 1890.]
- MEIER, M. F. Glaciers. *Transactions. American Geophysical Union*, Vol. 44, No. 2, 1963, p. 581–85. [Survey of recent U.S. research.]
- MIDTTUN, O. Breane i norsk diktning. *Den Norske Turistforenings Årbok*, 1961, p. 55–74. [Glaciers in Norwegian literature.]
- NIELSEN, L. E. A glaciological reconnaissance of the Columbia Glacier, Alaska. *Arctic*, Vol. 16, No. 2, 1963, p. 134–42. [By 1955 and 1957 Chugach Mountains Expedition.]
- NYE, J. F. On the theory of the advance and retreat of glaciers. *Geophysical Journal of the Royal Astronomical Society*, Vol. 7, No. 4, 1963, p. 431–56. [Includes effect of diffusion of kinematic waves. Discusses relation between climate and advance or retreat and how one can be deduced from the other.]
- ORVIG, S., ed. McCall Glacier, Alaska: meteorological observations, 1957–1958. *Arctic Institute of North America. Research Paper No. 8*, 1961, [186] p. [Measurements of heat budget quantities and their relation to glacier activity.]
- ØSTREM, G., and KARLÉN, V. Nigardsbreens hydrologi 1962. En preliminær rapport om breens akkumulasjon og avsmelting i tiden fra september 1961 til september 1962. *Norsk Geografisk Tidsskrift*, Bd. 18, Ht. 3–4, 1961–62 [pub. 1963], p. 156–202. [Regime of Nigardsbreen (part of Jostedalsbreen), west Norway, during period September 1961 to September 1962. English summary.]
- PATERSON, W. S. B., and SAVAGE, J. C. Geometry and movement of the Athabasca Glacier. *Journal of Geophysical Research*, Vol. 68, No. 15, 1963, p. 4513–20. [Measurements of ice thickness and flow.]
- PATERSON, W. S. B., and SAVAGE, J. C. Measurements on Athabasca Glacier relating to the flow law of ice. *Journal of Geophysical Research*, Vol. 68, No. 15, 1963, p. 4537–43. [Analysis of glacier flow in terms of flow law of ice.]
- PÉWÉ, T. L. University of Alaska Gulkana Glacier project, 1962. *Arctic*, Vol. 16, No. 1, 1963, p. 46–47. [Account of field work; tentative results.]

- RENAUD, A., and others. Tritium variations in Greenland ice, by A. Renaud, E. Schumacher, B. Hughes, H. Oeschger and C. Mühlemann. *Journal of Geophysical Research*, Vol. 68, No. 13, 1963, p. 3783. [Measurements and interpretation of fluctuations.]
- SAVAGE, J. C., and PATERSON, W. S. B. Borehole measurements in the Athabasca Glacier. *Journal of Geophysical Research*, Vol. 68, No. 15, 1963, p. 4521-36. [Results from network of boreholes giving strain at depth.]
- SHUL'TS, V. L., ed. *Glyatsiologicheskaya ekspeditsiya na lednik Fedchenko (predvaritel'nyye rezul'taty issledovaniy)* [Glaciological expedition to Lednik Fedchenko (preliminary results of investigations)]. Tashkent, Izdatel'stvo Akademii Nauk Uzbekskoy SSR, 1960. 180 p. [Collected papers on work done during I.G.Y., 1957-58.]
- SWITHINBANK, C. W. M. Ice movement of valley glaciers flowing into the Ross Ice Shelf, Antarctica. *Science*, Vol. 141, No. 3580, 1963, p. 523-24. [Surface measurements show contributions of these glaciers of which largest is Byrd Glacier.]
- SWITHINBANK, C. W. M. Note on the valley glaciers that feed the Ross Ice Shelf. *Polar Notes* (Hanover, N.H.), No. 5, 1963, p. 51-56. [Place-names and relative sizes clarified: results of recent U.S. Navy photographs and author's ice surveys.]
- WEIDICK, A. Some glacial features at the inland ice margin south of Sdr. Ström fjord. *Meddelelser fra Dansk Geologisk Forening*, Bd. 15, Ht. 2, 1963, p. 189-99. [Based on study of air photos from 1936, 1948 and 1952. Danish summary.]
- WEIDICK, A. Some observations on steep ramps. *Meddelelser fra Dansk Geologisk Forening*, Bd. 15, Ht. 2, 1963, p. 200-11. [Observations at four localities in North and West Greenland. Danish summary.]
- WELLMAN, H. W. Transport of pebbles over smooth ice in Antarctica. *Nature*, Vol. 197, No. 4868, 1963, p. 681. [Observations at Hut Point peninsula.]
- WOOD, W. A. The icefield ranges research project. *Geographical Review*, Vol. 53, No. 2, 1963, p. 163-84. [Joint undertaking of Arctic Institute of North America and American Geographical Society in the Yukon Territory. Account of 1961 season.]

ICEBERGS. SEA, RIVER AND LAKE ICE

- BLACK, W. A. Geographical Branch program of ice surveys of the Gulf of St. Lawrence, 1956 to 1962. *Cahiers de Géographie de Québec*, Tom. 6, No. 11, 1962, p. 65-74. [Description of systematic programme.]
- CADWALADER, J. Arctic drift stations. *United States Naval Institute Proceedings*, Vol. 89, No. 4, 1963, p. 67-75. [Mainly story of U.S. drifting stations, with background narrative of previous and present Russian ones.]
- COBB, A. W. Salt incorporation in natural ices. *Science*, Vol. 141, No. 3582, 1963, p. 733. [Study of difference in ion content of lake ice with ϵ -axis vertical and horizontal.]
- DUTTA, S. Propagation of elastic waves in a floating transversely isotropic ice sheet. *Gerlands Beiträge zur Geophysik*, Bd. 71, Ht. 5, 1962, p. 292-99. [Theoretical calculation of frequency equation in a thin layer of floating ice.]
- FUJINO, K., and SUZUKI, Y. Hiteikōhō ni yoru kaihyō hyōatsu sokutei no kilcoromi. II [An attempt to estimate the thickness of sea ice by electric resistivity method. II]. *Teion-kagaku* [Low Temperature Science], Ser. A, Vol. 21, 1963, p. 151-57. [Test of methods. English summary.]
- ISHIDA, T. Kaihyōchū no dansaiha no dempa [Propagation of elastic waves in sea ice]. *Teion-kagaku* [Low Temperature Science], Ser. A, Vol. 21, 1963, p. 141-49. [Hammer seismic test of wave propagation in a block of young sea ice.]
- LAKTIONOV, A. F., and ROMANOVICH, Z. S. Sokrashchennyi spisok sovetskoy literatury po issledovaniyu arkticheskogo basseyna vysokoshirotnymi ekspeditsiyami i dreyfuyushchimi stantsiyami (1937-1962 gg.) [Abbreviated list of Soviet literature on study of the Arctic basin by high latitude expeditions and drifting stations (1937-62)]. *Problemy Arktiki i Antarktiki* [Problems of the Arctic and Antarctic], Vyp. 11, 1962, p. 115-28.
- MACKAY, D. K. River-ice conditions in the Nelson River drainage system. *Canada. Department of Mines and Technical Surveys. Geographical Branch. Geographical Paper No. 34*, 1962, 42 p. [Study of correlation of river ice phenomena from year to year.]
- MACKAY, D. K. Trends and factors affecting break-up and freeze-up dates in the Nelson River drainage system. *Canada. Department of Mines and Technical Surveys. Geographical Branch. Geographical Paper No. 35*, 1962, 37 p. [Discussion of possible long-term variations and their climatic and hydrological implications.]
- MELLOR, M. Promoting the decay of sea-ice. *Arctic*, Vol. 16, No. 2, 1963, p. 142. [Study at McMurdo Sound of effect of flooding sea ice with sea-water in spring.]
- RIST, S. Thjórðársárisar. *Jökull*, ÁR 12, 1962, p. 1-30. [Winter ice of Thjórðársá river system, south Iceland. Description of ice regime. English summary.]
- ROBIN, G. DE Q. Ocean waves and pack ice. *Polar Record*, Vol. 11, No. 73, 1963, p. 389-93. [Historical outline of work done in this field.]
- ROBIN, G. DE Q. Wave propagation through fields of pack ice. *Philosophical Transactions of the Royal Society*, Ser. A, Vol. 255, No. 1057, 1963, p. 313-39. [Study of data recorded in Weddell Sea, 1959-60.]
- SABININ, K. D. K voprosu o vliyaniy snezhnogo pokrova i tepla vody na narastaniye l'da [On the problem of the influence of snow cover and water heat on ice growth]. *Okeanologiya* [Oceanography], Tom 3, Vyp. 1, 1963, p. 23-29. [Contribution to theory of sea-ice growth.]
- SCHOLANDER, P. F., and others. Radio-carbon age and oxygen-18 content of Greenland icebergs, by P. F. Scholander, W. Dansgaard, D. C. Nutt, H. deVries, L. K. Coachman, E. Hemmingsen. *Meddelelser om Grønland*, Bd. 165, Nr. 1, 1962, 26 p. [Analysis used to determine age of ice samples.]
- SERIKOV, M. I. Prochnost' morskoy antarkticheskoy l'da pri izgibe [Flexural strength of Antarctic sea ice]. *Informatsionnyy Byulleten' Sovetskoy Antarkticheskoy Ekspeditsii* [Information Bulletin of the Soviet Antarctic Expedition], No. 36, 1962, p. 30-35. [Results of experiments carried out at Mirny in 1960.]

- SOKOLOV, A. L. Dreyf'lov v arkticheskom bassejny i izmeneniye ledovykh usloviy na trasse severnogo morskogo puti [Drift of ice in the Arctic basin and change of ice conditions along the Northern Sea Route]. *Problemy Arktiki i Antarktiki [Problems of the Arctic and Antarctic]*, Vyp. 11, 1962, p. 81–89. [Two patterns of circulation distinguished, giving rise to different conditions on sea route.]
- TRESHNIKOV, A. F. Osobennosti ledovogo rezhima Yuzhnogo Ledovitogo Okeana [Features of the ice regime of the Southern Ocean]. *Trudy Sovetskoy Antarkticheskoy Ekspeditsii [Transactions of the Soviet Antarctic Expedition]*, Tom 21, 1963, 237 p. [General remarks on character of Antarctic floating ice; detailed observations from Soviet ships and aircraft, 1955–58, given in appendices.]
- WARK, D. Q., and POPHAM, R. W. The development of satellite ice surveillance techniques. (In Wexler, H., and Caskey, J. E., ed. *Proceedings of the first international symposium on rocket and satellite meteorology*. Amsterdam, North-Holland, 1963, p. 415–18.) [Discussion of methods and results from *Tiros* satellites; joint U.S.–Canadian project reviewed.]
- WEEKS, W. F. Sea and lake ice. *Transactions. American Geophysical Union*, Vol. 44, No. 2, 1963, p. 588–92. [Survey of recent U.S. work.]
- WILLIAMS, G. P. Probability charts for predicting ice thickness. *Engineering Journal* (Montreal), Vol. 46, No. 6, 1963, p. 31–35. [On lakes, rivers and harbours.]

GLACIAL GEOLOGY

- BEATY, C. B. Topographic effects of glacial Lake Missoula: a preliminary report. *Californian Geographer*, Vol. 3, 1962, p. 113–22. [Evidence for Pleistocene ice-dammed lake covering most of western Montana.]
- BROECKER, W. S. The contribution of pressure-induced phase changes to glacial rebound. *Journal of Geophysical Research*, Vol. 67, No. 12, 1962, p. 4837–42. [Estimates of effect of ice on phase change in rocks and implications in glacial isostasy.]
- CALKIN, P., and CAILLEUX, A. A quantitative study of cavernous weathering (taffonis) and its application to glacial chronology in Victoria Valley, Antarctica. *Zeitschrift für Geomorphologie*, Neue Folge, Bd. 6, Ht. 3–4, 1962, p. 317–24.
- DERBYSHIRE, E. Fluvio-glacial erosion near Knob Lake, central Quebec–Labrador, Canada. *Geological Society of America. Bulletin*, Vol. 73, No. 9, 1962, p. 1111–26. [Analysis of features in Quebec and Labrador suggests large amounts of stagnant ice during deglaciation.]
- ELSON, J. A. The geology of tills. *National Research Council of Canada. Associate Committee on Soil and Snow Mechanics. Proceedings, 14th Canadian Soil Mechanics Conference, Oct. 13–14, 1960*, 1961, p. 5–35. [Discussion of method by which material is picked up, transported and deposited by glacier.]
- GOLDTHWAIT, R. P. Dating the Little Ice Age in Glacier Bay, Alaska. *Report of the International Geological Congress, XXI Session, Norden, 1960*, Pt. 27, 1963, p. 37–46. [Radiocarbon dating used to analyse glacier fluctuations since Wisconsin Ice Age.]
- HOPPE, G. The continuation of the Uppsala esker in the Bothnian Sea and ice recession in the Gavle area. *Geografiska Annaler*, Årg. 43, Ht. 3–4, 1961, p. 329–35. [New evidence suggests rethinking on position of ice front during recession.]
- HOPPE, G. Subglacial sedimentation, with examples from northern Sweden. *Geografiska Annaler*, Årg. 45, Ht. 1, 1963, p. 41–51. [With appendix on seismic investigations in area south of Jokkmokk, Lule Lappmark, by S. R. Ekman.]
- KIRBY, R. P. Deglaciation in central Labrador–Ungava as interpreted from glacial deposits. *Geographical Bulletin* (Ottawa), No. 16, 1961, p. 4–23. [French version follows, p. 24–39.]
- KRINSLEY, D. H., and TAKAHASHI, T. Surface textures of sand grains—an application of electron microscopy: glacial. *Science*, Vol. 138, No. 3546, 1962, p. 1262–64. [Electron microscope comparison between quartz compressed with ice and natural sands enables identification of glacial as opposed to aeolian or beach sands.]
- ØSTREM, G. Nya metoder for åldersbestämning av ändmoräner. *Ymer*, Årg. 82, Ht. 4, 1962, p. 241–52. [Results of ¹⁴C dating of organic particles in ice cores in end moraines, Kebnekajse, north Sweden, and Jotunheimen, Norway.]
- PENTTILÄ, S. The deglaciation of the Laanila area, Finnish Lapland. *Bulletin de la Commission Géologique de Finlande*, No. 203, 1963, 71 p.
- ROBITAILLE, B., and GREFFARD, C. Notes sur les matériaux terminaux du glacier Thompson, Canada arctique. *Geographical Bulletin* (Ottawa), No. 17, 1962, p. 85–94. [Effect of this advancing glacier on the outwash deposits in front of it.]
- STALKER, A. M. Ice-pressed drift forms and associated deposits in Alberta. *Canada. Department of Mines and Technical Surveys. Geological Survey. Bulletin* No. 57, 1960, 38 p. [Interpretation of deposits as formations resulting from pressing material into holes beneath the ice.]
- STORK, A. Plant immigration in front of retreating glaciers, with examples from the Kebnekajse area, northern Sweden. *Geografiska Annaler*, Årg. 45, Ht. 1, 1963, p. 1–22.
- VIKKALA, K. On ice-marginal features in south-western Finland. *Bulletin de la Commission Géologique de Finlande*, No. 210, 1963, 76 p.
- WEDICK, A. Ice margin features in the Julianehåb district, south Greenland. *Meddelelser om Grønland*, Bd. 165, Nr. 3, 1963, 133 p. [Field work in 1957, 1958 and 1960.]
- WINTERS, H. A. Landforms associated with stagnant glacial ice. *Professional Geographer*, Vol. 13, No. 4, 1961, p. 19–23. [General description.]
- YEVTEYEV, S. A. Forma vershin gor v rayone Mak-Merdo i vozrast antarkticheskogo lednikovogo pokrova [Form of mountain peaks in the McMurdo region and the age of the Antarctic Ice Sheet]. *Informatsionnyy Byulleten' Sovetskoy Antarkticheskoy Ekspeditsii [Information Bulletin of the Soviet Antarctic Expedition]*, No. 36, 1962, p. 5–6. [Evidence that glaciation preceded volcanism.]

FROST ACTION ON ROCKS AND SOIL. FROZEN GROUND. PERMAFROST

- BLACK, R. F. Les coins de glace et de gel permanent dans le nord de l'Alaska. *Annales de Géographie*, 72^e An., No. 391, 1963, p. 257-71. [Results of author's permafrost studies in Alaska; discussion.]
- BONE, R. M. A note on permafrost in western Siberia. U.S.S.R. *Geographical Bulletin* (Ottawa), No. 17, 1962, p. 95-98. [General discussion of different zones of permafrost.]
- CHOU YU-WU and TU YUNG-HUANG. Ching-tsang kao yuan tung t'u ch'u pu kao ch'a [Preliminary studies on frozen earth on the Tsinghai-Tibetan plateau]. *Kexue Tongbao (K'o-hsiieh T'ung-pao)* [*Scientia*], 1962, No. 3, p. 60-63. [Description of permafrost conditions.]
- COOK, F. A., and RAICHE, V. G. Freeze-thaw cycles at Resolute, N.W.T. *Geographical Bulletin* (Ottawa), No. 18, 1962, p. 64-78. [Soil-temperature data, 1960.]
- COOK, F. A., and RAICHE, V. G. Simple transverse nivation hollows at Resolute, N.W.T. *Geographical Bulletin* (Ottawa), No. 18, 1962, p. 79-85. [Measurement of shapes of hollows.]
- GARCIA-SÁINZ, L. Frostbodenformen im Idubeda-Gebirge (Spanien). *Zeitschrift für Geomorphologie*, Neue Folge, Bd. 6, Ht. 1, 1962, p. 33-50. [Description of frost action effects in this part of Spain.]
- KINOSITA, S., and ONO, T. Tōjōryoku. I. Omoni gamba chōsa ni tsuite [Heaving force of frozen ground. I. Mainly on the results of field researches]. *Teion-kagaku [Low Temperature Science]*, Ser. A, Vol. 21, 1963, p. 117-39. [Field experiments in which heaving is prevented and force required measured.]
- KRINSLEY, D. B. Influence of snow cover on frost penetration. *U.S. Geological Survey, Professional Paper 475-B*, Article 38, 1963, p. B144-B147. [Results of field observations, Alaska, 1961.]
- KRINSLEY, D. B. Thermal regime during the thaw of Centrum Sø, northeast Greenland. *U.S. Geological Survey, Professional Paper 424-C*, No. 228, 1961, p. 219-21. [Results of regular observations, spring 1960.]
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MEETINGS OF THE GLACIOLOGICAL SOCIETY

JANUARY TO MARCH 1964

11 March 1964, at the Department of Geology, University of Birmingham

MR. C. S. L. OMMANNEY gave a lecture on

Field work in the Canadian Arctic (an account of the Jacobsen-McGill Arctic Research Expeditions to Axel Heiberg Island)

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