

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

- BARCLAY, L. W. Sledging and surveying. (In Brunt, Sir D., ed. *The Royal Society International Geophysical Year Antarctic Expedition. Halley Bay, Coats Land, Falkland Islands Dependencies, 1955-59*. Vol. 4. London, Royal Society, 1964, p. 329-38.) [Navigation and surveying, Coats Land and Brunt Ice Shelf.]
- DRAKIN, A. G. Nekotoryye itogi rabot sed'moy sovetskoy antarkticheskoy ekspeditsii [Some results of the work of the seventh Soviet Antarctic expedition]. *Problemy Arktiki i Antarktiki* [Problems of the Arctic and Antarctic], Vyp. 46, 1964, p. 35-40. [Summary of scientific results, 1961-63.]
- DUBROVIN, L. I., ed. Pyataya kontinental'naya ekspeditsiya 1959-1961 gg. Materialy glyatsiologicheskikh issledovaniy na stantsii Lazarev [Fifth continental expedition, 1959-61. Glaciological studies at "Lazarev" station]. *Trudy Sovetskoy Antarkticheskoy Ekspeditsii* [Transactions of the Soviet Antarctic Expedition], Tom 34, 1964, 89 p. [Snow and firn studies, structure and dynamics of the ice shelf, fast ice.]
- MACDOWALL, J. Glaciological observations. Part I. Glaciological observations at the base. (In Brunt, Sir D., ed. *The Royal Society International Geophysical Year Antarctic Expedition. Halley Bay, Coats Land, Falkland Islands Dependencies, 1955-59*. Vol. 4. London, Royal Society, 1964, p. 269-313.) [Snow accumulation measurements; height and temperature of, and wind profile immediately above, the ice shelf; daily summary of glaciological observations.]
- MACDOWALL, J., and others. Glaciological observations. Part II. Glaciological observations during sledging journeys, by J. MacDowall, L. W. Barclay and J. M. C. Burton. (In Brunt, Sir D., ed. *The Royal Society International Geophysical Year Antarctic Expedition. Halley Bay, Coats Land, Falkland Islands Dependencies, 1955-59*. Vol. 4. London, Royal Society, 1964, p. 314-25.) [Snow accumulation, ice-hill investigations and the surface of the ice shelf.]
- [ODISHAW, H., and others, ed.] Catalogue of data in the World Data Centers for the period of the International Geophysical Year and International Geophysical Cooperation-1959 (1 July 1957-31 December 1959). [Edited by H. Odishaw, P. J. Hart and R. Y. Dow.] *Annals of the International Geophysical Year*, Vol. 36, 1964, 744 p. [Glaciology, p. 295-343. Includes list of stations and titles of reports received.]
- SCHYTT, V. Scientific results of the Swedish glaciological expedition to Nordaustlandet, Spitsbergen, 1957 and 1958. *Geografiska Annaler*, Vol. 46, No. 3, 1964, p. 243-81. [General account of expedition; account of previous work. Detailed account of work done at Ahlmann station, and at Vestfonna, Sörfonna and Austfonna.]
- SHIH YA-FENG. Wu nien lai te Chung-kuo ping-ch'uan-hsüeh, tung-t'u-hsüeh yü kan-han ch'u-shui-wen yen-chiu [Chinese research on glaciology, permafrost and arid land hydrography during the past five years]. *Kexue Tongbao (K'o-hsüeh Tung-pao)* [Scientia], 1964, No. 3, p. 218-25. [Summary of work done principally in relation to water resources. English translation: Dept. of Commerce, Office of Technical Services, Washington, D.C., JPRS:25,016, 10 June 1964.]
- STEVENSON, C. F., comp. A list of named glaciological features in Canada. *Gazetteer of Canada. Special Supplement No. 1*. Ottawa, Canada. Department of Mines and Technical Surveys. Geographical Branch, 1964. vii, 14 p. [Includes latitude, longitude and map reference.]

GLACIOLOGICAL INSTRUMENTS AND METHODS

- ANDERSEN, B. G. Deuterium variations related to snow pit stratigraphy in the Thiel Mountains, Antarctica. *Polarforschung*, Bd. 5, Jahrg. 33, Ht. 1-2, 1963 [pub. 1964], p. 200-01. [The summer snow has a considerably higher deuterium content than winter snow.]
- BAILEY, J. T., and others. Radio echo sounding of Polar ice sheets, by J. T. Bailey, S. Evans and G. de Q. Robin. *Nature*, Vol. 204, No. 4957, 1964, p. 420-21. [Echoes were obtained through 1,400 m. of ice by new apparatus.]
- BRANDENBERGER, A. J. Aerial triangulation in the Antarctic. *Photogrammetric Engineering*, Vol. 30, No. 2, 1964, p. 197-201. [Description of method used to determine ice flow between "Byrd" station and Whitmore Mountains.]
- CHAILLOU, A., and VALLON, M. Étude de la zone corticale des glaciers tempérés par prospection électrique, avec un potentiomètre d'impédance d'entrée infinie. *Annales de Géophysique*, Tom. 20, No. 2, 1964, p. 201-05. [The electrical examination of the upper layers of a glacier is limited, but the method has considerable applications in spite of this.]
- KUL'BITSKIY, V. F. Bur dlya obrazovaniya kernov iz merzlogo grunta [Drill bit for drilling holes in frozen ground]. *Byulleten' Izobreteniy* [Bulletin of Inventions], Tom 40, No. 15, 1963, p. 116.
- LORIUS, C. Isotopes in relation to polar glaciology. *Polar Record*, Vol. 12, No. 77, 1964, p. 211-22. [Survey of use of radioactive isotopes in glaciology.]
- LORIUS, C. L'utilisation des isotopes dans l'étude glaciologique des calottes polaires. *TAAF (Territoire des Terres Australes et Antarctiques Françaises)*, No. 25, 1963, p. 2-19. (Expéditions Polaires Françaises (Missions Paul-Émile Victor), Publication No. 253.) [Age of some ice caps estimated by isotopes corresponds with age determined stratigraphically, but not in every case; further research is necessary.]

- NOTTARP, K. Elektronische Distanzmessung hoher Genauigkeit im Polargebiet. *Polarforschung*, Bd. 5, Jahrg. 33, Ht. 1-2, 1963 [pub. 1964], p. 180-81. [Use of tellurometers in Greenland and Antarctica, and modifications necessary. English abstract.]
- ÖSTREM, G. A method of measuring water discharge in turbulent streams. *Geographical Bulletin* (Ottawa), No. 21, 1964, p. 21-43. [Injection of brine into the river and downstream measurements of changes of electrical conductivity as the salt wave passes; includes a list of the field equipment needed.]
- WALFORD, M. E. R. Radio echo sounding through an ice shelf. *Nature*, Vol. 204, No. 4956, 1964, p. 317-19. [Method used and map of Brunt Ice Shelf with ice thicknesses along the route travelled.]

PHYSICS OF ICE

- EVANS, D. G., and HUTCHINSON, W. C. A. The electrification of freezing water droplets and of colliding ice particles. *Quarterly Journal of the Royal Meteorological Society*, Vol. 89, No. 381, 1963, p. 370-75. [Measurement of charge produced when supercooled droplets freeze.]
- FISCHER, W. H., and PERDUE, C. R. Shock-induced freezing of "activated" supercooled water. *Nature*, Vol. 204, No. 4960, 1964, p. 764-65. [Electromagnetic radiation emitted by mercury droplet in a bulb of neon gas raises temperature at which supercooled water freezes when agitated.]
- GARTEN, V. A., and HEAD, R. B. A theoretical basis of ice nucleation by organic crystals. *Nature*, Vol. 205, No. 4967, 1965, p. 160-62. [Study of possible factors affecting epitaxy of ice on organic crystals.]
- HOBBS, P. V., and MASON, B. J. The sintering and adhesion of ice. *Philosophical Magazine*, Eighth Ser., Vol. 9, No. 98, 1964, p. 181-97. [Experiments on small ice spheres in contact and theoretical interpretation.]
- KUROIWA, D. Netsufushokuhō de kansoku shita kōri no kemmamen no mamō [Surface damage on polished ice crystals revealed by thermal etching]. *Teion-kagaku* [Low Temperature Science], Ser. A, Vol. 22, 1964, p. 25-57. [Study of defects resulting from polishing procedures. English summary.]
- LATHAM, J. Symposium on ice crystals and ice nucleation, Berkeley, California, August 1963. *British Journal of Applied Physics*, Vol. 14, No. 12, 1963, p. 825-26. [Summary of recent work on properties of ice relevant to cloud physics.]
- LATHAM, J., and SAUNDERS, C. P. R. Aggregation of ice crystals in strong electric fields. *Nature*, Vol. 204, No. 4965, 1964, p. 1293-94. [Letter. Experimental investigation of adhesion of ice crystals to ice spheres shows that strong fields greatly assist adhesion.]
- LATHAM, J., and STOW, C. D. Electrification produced by collision between ice crystals and soft hail pellets in a thunderstorm. *Quarterly Journal of the Royal Meteorological Society*, Vol. 91, No. 387, 1965, p. 99-100. [Letter. Brief report on experiments and discussion of their implications for theory of thunderstorm electricity.]
- LLIBOUTRY, L. Nouveau calcul de la variation du point de fusion sous l'effet des contraintes et application au processus de fonte et regel sous-glaciaire. *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences (Paris)*, Tom. 258, No. 5, 1964, p. 1577-79. [Theory of depression of melting point of ice under a uniaxial stress.]
- MACCREADY, P. B., and PROUDFIT, A. Self-charging of melting ice. *Quarterly Journal of the Royal Meteorological Society*, Vol. 91, No. 387, 1965, p. 54-59. [Laboratory observation of positive charge acquired by water droplets on freezing in an air stream.]
- SAVEL'YEV, V. A., and SOKOLOV, N. D. Raschet udlineniya vodorodnoy svyazi pri izotopicheskom zameshchenii vo l'du [Calculation of the elongation of the hydrogen bond during isotopic substitution in ice]. *Fizika Tverdogo Tela* [Physics of the Solid State], Tom 5, Vyp. 11, 1963, p. 3273-75. [Translation in *Soviet Physics Solid State*, Vol. 5, No. 11, 1964, p. 2393-95.]
- STOTT, D., and HUTCHINSON, W. C. A. The electrification of freezing water drops. *Quarterly Journal of the Royal Meteorological Society*, Vol. 91, No. 387, 1965, p. 80-86. [Evidence for a charge separation across the boundary between freezing water and ice, water being positive and ice negative.]
- WAKAHAMA, G. Kōri no sosei henkei ni tsuite. V. Takesshōhyō no sosei henkei [On the plastic deformation of ice. V. Plastic deformation of polycrystalline ice]. *Teion-kagaku* [Low Temperature Science], Ser. A, Vol. 22, 1964, p. 1-24. [Optical observation of deformations in individual grains in a polycrystalline specimen. English summary.]

LAND ICE. GLACIERS. ICE SHELVES

- BUT, I. V. O sootvetstvii mezhdū obshchey tsirkulyatsiy atmosfery i sovremennym raspredeleniyem lednikov v severnom polusharii [The correlation between the general circulation of the atmosphere and the present distribution of glaciers in the Northern Hemisphere]. *Informatsionnyy Sbornik o Rabotakh po Mezhdunarodny Geofizicheskiy Godu* [Collected Information on Work in the International Geophysical Year], No. 9, 1962, p. 10-39. [Suggests classification of glaciers based on atmospheric circulation.]
- CROZAZ, G., and others. Antarctic snow chronology with ²¹⁰Pb, by G. Crozaz, E. Picciotto and W. de Breuck. *Journal of Geophysical Research*, Vol. 69, No. 12, 1964, p. 2597-604. [²¹⁰Pb activity found to decrease exponentially with depth implying constant accumulation over last 100 years.]
- DIETERLÉ, G., and PETERSCHMITT, E. Sondages séismiques en Terre de la Reine Maud. *Mémoires. Académie Royale des Sciences d'Outre-Mer. Classe des Sciences Techniques. Collection in-8°* (Bruxelles), Tom. 13, Fasc. 4, 1964, p. 1-101. [Through refraction the variation of velocity with depth is calculated and the content of the ice shelf determined.]
- FÖRTSCH, O. Die Talformen und die Talfüllung unter den Gletschern der Ötztaler Alpen. *Polarforschung*, Bd. 5, Jahrg. 33, Ht. 1-2, 1963 [pub. 1964], p. 195-96. [Measurements of seismic velocities in glaciers in Ötztal, Austria. Large thicknesses of ground moraine found. English abstract.]
- FRISTRUP, B. Further investigations of the Greenland ice cap. *Geografisk Tidsskrift*, Bd. 63, No. 2, 1964, p. 121-29. [Accumulation and ablation studies, mass balance studies, ice thickness, age of the ice, and formation and growth of the Greenland Ice Sheet.]

- FUJIWARA, K. Preliminary report on the morphology of the inland ice sheet of the Mizuho Plateau, East Antarctica. *Antarctic Record* (Tokyo), No. 23, 1964, p. 1-11. [General account of the inland ice sheet, morphology of ice sheet near the Yamamoto Mountains, and in the inland plateau.]
- GOW, A. J. The mystery of the stranded fish. *Antarctic* (Wellington, N.Z.), Vol. 3, No. 10, 1964, p. 470-71. [New suggestion to F. Debenham's hypothesis that fish remains on top of the ice in McMurdo Sound worked up from the bottom through the ice owing to surface weathering.]
- GROSVAL'D, M. G. Sovremennyye ledniki v gorakh severno-vostochnoy Tuvy [Present-day glaciers in the mountains of north-eastern Tuva]. *Issledovaniya Lednikov i Lednikovyykh Rayonov* [Investigations on Glaciers and Glaciated Regions], No. 3, 1963, p. 48-55. [Description.]
- HAEFELI, R. Welche Zeit ist notwendig, um unter gegebenen Akkumulations- und Temperaturverhältnissen einen Eisschild von der Grösse des grönländischen Inlandeises oder der Antarktis aufzubauen? *Polarforschung*, Bd. 5, Jahrg. 33, Ht. 1-2, 1963 [pub. 1964], p. 176-78. [Estimate of time needed to build up ice sheets.]
- KICK, W. Der Chogo-Lungma-Gletscher im Karakorum. II. *Zeitschrift für Gletscherkunde und Glazialgeologie*, Bd. 5, Ht. 1, 1964, p. 1-59. [Results of the elaborations of the glaciological observations in the region in October 1954.]
- KOERNER, R. M. An ice caldera near Hope Bay, Trinity Peninsula, Graham Land. *British Antarctic Survey Bulletin*, No. 3, 1964, p. 37-39. [Description, and explanation of mode of origin.]
- LEWIS, C. A. The glacier of Kaldalón, north-west Iceland. *Geographical Journal*, Vol. 130, Pt. 3, 1964, p. 390-96. [General description, including temperatures, advances and retreats since 1931, and snowfall.]
- LIMBERT, D. W. S. The absolute and relative movement, and regime of the Brunt Ice Shelf near Halley Bay. *British Antarctic Survey Bulletin*, No. 3, 1964, p. 1-11. [Absolute movement, strain-rates in the surface of the ice shelf and vertical strains. The probable regime is considered in relation to its environment.]
- LISIGNOLI, C. A. Movement of the Filchner Ice Shelf, Antarctica. *Transactions. American Geophysical Union*, Vol. 45, No. 2, 1964, p. 391-97. [Studies by Argentine scientists at "General Belgrano" and "Ellsworth" station, Antarctica, during the years 1957-62.]
- LLIBOUTRY, L. Instability of temperate ice-sheets owing to a feed-back mechanism. *Nature*, Vol. 203, No. 4945, 1964, p. 627-29; Vol. 204, No. 4955, 1964, p. 231. [Letter. Temperate ice sheets fluctuate within areas of stability, and from time to time recede or advance from one area of stability to another. This illuminates the behaviour of glaciers. It explains the formation of recessional moraines during the last stage of the Ice Age.]
- LORENZO, J. L. *Los glaciares de México. Segunda edición.* México, D.F., Universidad Nacional Autónoma de México, 1964. 124 p. (Monografías del Instituto de Geofísica, 1.) [Report of the Glaciology Section of the Mexican National Committee for the International Geophysical Year. Similar to first edition but adds details on glaciers of Iztaccihuatl. English summary by J. V. Papworth, p. 97-124.]
- McHUGO, M. B. The mapping of British Antarctic Territory. *British Antarctic Survey Bulletin*, No. 4, 1964, p. 13-14. [Map of British Antarctic Territory, South Georgia and South Sandwich Islands. Index to Directorate of Overseas Surveys maps.]
- MATHEWS, W. H. Discharge of a glacial stream. *Organisation Météorologique Mondiale et Association Internationale d'Hydrologie Scientifique. Symposium. Eaux de surface, tenu à l'occasion de l'assemblée générale de Berkeley de l'Union Géodésique et Géophysique Internationale, 19-8-31-8 1963*, 1964, p. 290-300. [Calculation of influence of meteorological variables on run-off for river fed principally by Athabasca Glacier.]
- MATHEWS, W. H. Two self-dumping ice-dammed lakes in British Columbia. *Geographical Review*, Vol. 55, No. 1, 1965, p. 46-52. [Description of Strohn Lake and Summit Lake in northern British Columbia which have recently started clearing themselves automatically.]
- MELLOR, M. Remarks concerning the Antarctic mass balance. *Polarforschung*, Bd. 5, Jahrg. 33, Ht. 1-2, 1963 [pub. 1964], p. 179-80. [New estimates of snow accumulation, ice velocities and iceberg discharge. Indirect evidence is considered.]
- MILLER, M. M. Inventory of terminal position changes in Alaskan coastal glaciers since the 1750's. *Proceedings of the American Philosophical Society*, Vol. 108, No. 3, 1964, p. 257-73. [Details of glaciers in many regions of this district. Necessity of taking into account oceanographic and meteorological factors, and of long-term glaciological and geophysical investigations.]
- ROBINSON, E. S. Results of geophysical studies on the McMurdo to South Pole traverse. *University of Wisconsin. Department of Geology, Geophysical and Polar Research Center. Research Report Series*, No. 62-6, 1962, 49 p. [Includes barometric altimetry, seismic reflection and refraction, gravimetric and magnetic observations.]
- RÓZYCKI, S. Z. Der Rhythmus der Veränderungen des antarktischen Inlandeises unter dem Einfluss der Klimaschwankungen. *Polarforschung*, Bd. 5, Jahrg. 33, Ht. 1-2, 1963 [pub. 1964], p. 213-15. [The cycle of changes of the Antarctic Ice Sheet under the influence of climatic variations is discussed.]
- SIGVALDASON, G. E. Influence of geothermal activity on the chemistry of three glacier rivers in southern Iceland. *Jökull*, Ár 13, No. 3, 1963, p. 10-17.
- SKINNER, B. E. Measurement of twentieth century ice loss on the Tasman Glacier, New Zealand. *New Zealand Journal of Geology and Geophysics*, Vol. 7, No. 4, 1964, p. 796-803. [At an altitude of 1,100 m. an average thickness of 82.1 m. of ice has been lost since 1890. The total mass loss over the whole ablation zone in this time is of the order of 3×10^{12} kg.]
- SMITH, J. H. L. Bericht über glaziologische Untersuchungen des Amery-Schelfeises in der Antarktis. *Polarforschung*, Bd. 5, Jahrg. 33, Ht. 1-2, 1963 [pub. 1964], p. 190-91. [Amery Ice Shelf flows at about $1,500 \pm 300$ m. yr.⁻¹, much faster than most other ice shelves.]
- SWITHINBANK, C. W. M. To the valley glaciers that feed the Ross Ice Shelf. *Geographical Journal*, Vol. 130, Pt. 1, 1964, p. 32-48. [1960-61 and 1961-62 seasons.]
- SZUPRYCZYŃSKI, J. Rzeźba strefy marginalnej i typy deglacji lodowców południowego Spitsbergenu. *Prace Geograficzne*, No. 39, 1963, 162 p. [Relief of marginal zone and types of deglaciation of glaciers in south Vestspitsbergen. Field work in 1959 and 1960. English and Russian summaries.]

ICEBERGS. SEA, RIVER AND LAKE ICE

- FLATJORD, S. Utvikling av isdekket på norske vassdrag samt litt om råkdannelse. *Norsk Geografisk Tidsskrift*, Bd. 19, Ht. 3-4, 1963-64, [pub.] 1964, p. 142-58. [Conditions under which frazil ice will attach itself to ice cover over flowing water. English summary, p. 157-58.]
- HEAP, J., and others. Sea ice conditions, by J. Heap, H. E. G. Dyer and D. W. S. Limbert. (In Brunt, Sir D., ed. *The Royal Society International Geophysical Year Antarctic Expedition. Halley Bay, Coats Land, Falkland Islands Dependencies, 1955-59*. Vol. 4. London, Royal Society, 1964, p. 339-47.) [Ice conditions and ice cycle at Halley Bay, and sea ice thickness measurements.]
- LA CANAL, L. M. DE. *Bases para el pronostico del estado de los hielos de mar en algunas regiones del sector Antártico Argentino*. Buenos Aires, Servicio de Hidrografía Naval, 1963. 65 p. (H.412.) [Bases for forecasting sea ice conditions in Marguerite Bay, Antarctic Peninsula and South Orkney Islands. Includes abbreviated text in English.]
- LESCHACK, L. A., and HAUBRICH, R. A. Observations of waves on an ice-covered ocean. *Journal of Geophysical Research*, Vol. 69, No. 18, 1964, p. 3815-21. [Gravimeter observations on floating ice.]
- TABATA, T., and FUJINO, K. Kaihyō no rikigakuteki seishitsu no kenkyū. VII. Genjō ni okeru mage kyōdo no sokutei [Studies on the mechanical properties of sea ice. VII. Measurement of flexural strength *in situ*]. *Teion-kagaku [Low Temperature Science]*, Ser. A, Vol. 22, 1964, p. 147-54. [Variation with rate of stressing. English summary.]
- THORÉN, R. Bildserie. På isrekognoscering över norra polarområdet. *Ymer*, Årg. 84, Ht. 1, 1964, p. 39-57. [Series of pictures from American ice reconnaissance flights in July-August 1963 over north polar region. Text in Swedish and English.]
- UNTERSTEINER, N. Calculations of temperature regime and heat budget of sea ice in the central Arctic. *Journal of Geophysical Research*, Vol. 69, No. 22, 1964, p. 4755-66. [The equation of heat conduction, with variable parameters, internal heat source and an advective term, is integrated numerically for sea ice of equilibrium thickness. Magnitude of terms for central Arctic given.]
- WENTWORTH, F. L., and COHN, M. Electrical properties of sea ice at 0.1 to 30 Mc/s. *Radio Science*, Vol. 68D, No. 6, 1964, p. 681-93. [Measurements of dielectric constant and loss tangent.]
- WILLIAMS, G. P., and GOLD, L. W. The use of dust to advance the break-up of ice on lakes and rivers. *Proceedings. Eastern Snow Conference, 1963 annual meeting, 1963*, p. 31-60. [Also published as *Canada. National Research Council. Division of Building Research. Technical Paper No. 165, 1963*.]
- YESKIN, L. I. O rasprostraneniï aysbergov k severu ot beregov Vostochnoy Antarktidy v navigatsiyu 1962/63 g. [Distribution of icebergs north of the coast of eastern Antarctica in the navigation season of 1962-63]. *Informatsionnyy Byulleten' Sovetskoy Antarkticheskoy Ekspeditsii [Information Bulletin of the Soviet Antarctic Expedition]*. No. 46, 1964, p. 34-36.

GLACIAL GEOLOGY

- BIRKELAND, P. W. Pleistocene glaciation of the northern Sierra Nevada, north of Lake Tahoe, California. *Journal of Geology*, Vol. 72, No. 6, 1964, p. 810-25. [Four major glaciations are recognized in this area, two of pre-Wisconsin age and two of Wisconsin age.]
- EWING, M., and DONN, W. L. Polar wandering and climate. (In Munyan, A. C., ed. *Polar wandering and continental drift. Society of Economic Paleontologists and Mineralogists. Special Publication No. 10, 1963*, p. 94-99.)
- HARLAND, W. B., and RUDWICK, M. J. S. The great Infra-Cambrian Ice Age. *Scientific American*, Vol. 211, No. 2, 1964, p. 28-36. [Considerable geological evidence for an extensive glaciation some 600 million years ago. Its end caused an alteration of climate that made possible the proliferation of animal life in Cambrian times.]
- HUME, J. D., and SCHALK, M. The effects of ice-push on arctic beaches. *American Journal of Science*, Vol. 262, No. 2, 1964, p. 267-73. [Description of ridges on northern Alaskan coast.]
- JONES, O. T. The glacial and post-glacial history of the lower Teifi valley. *Proceedings of the Geological Society of London*, No. 1617 (session 1963-64), 1964, p. 97-100. [Because the coastline of Cardigan Bay was under ice, an enormous volume of melt water from the ice surface made its way into the Teifi Valley and caused rapid erosion of the gorges there.]
- MAYR, F. Untersuchungen über Ausmass und Folgen der Klima- und Gletscherschwankungen seit dem Beginn der postglazialen Wärmezeit. *Zeitschrift für Geomorphologie*, Neue Folge, Bd. 8, Ht. 3, 1964, p. 257-85. [In the Stubai mountains stratigraphical evidence was found for the existence of 5 post-alutheal periods of glacier advance.]
- MILLER, M. M. Morphogenetic classification of Pleistocene glaciations in the Alaska-Canada boundary range. *Proceedings of the American Philosophical Society*, Vol. 108, No. 3, 1964, p. 247-56. [A morphogenetic classification in cordilleran regions is especially helpful in delineating the repeated effects of Pleistocene glaciation.]
- ØSTREM, G. Ice-cored moraines in Scandinavia. *Geografiska Annaler*, Vol. 46, No. 3, 1964, p. 282-337. [Detailed field and laboratory study enables conclusions to be drawn on former size of glaciers and altitude of snow line throughout Scandinavia.]
- PENNY, L. F. A review of the last glaciation in Great Britain. *Proceedings of the Yorkshire Geological Society*, Vol. 34, Pt. 4, No. 20, 1964, p. 387-411. [Comparison with Würm moraines on the Continent; the Highland readvance; the Perth-Aberdeen readvance and Scottish readvance; and the "newer drift maximum".]
- PRICE, R. J. Land forms produced by the wastage of the Casement Glacier, southeast Alaska. *Institute of Polar Studies, Ohio State University. Report No. 9, 1964*, 24 p. [Description of processes producing melt-water channels and eskers.]
- SCHULTZ, G. *Glaciers and the Ice Age. Earth and its inhabitants during the Pleistocene*. New York, Holt, Rinehart and Winston Inc., [c1963]. 128 p. (Holt Library of Science. Series 1, [No.] 4.) [Introductory account of the Pleistocene epoch in glaciated areas of North America and Eurasia.]

- SUGGATE, R. P. New Zealand Quaternary chronology. *Revue de Géomorphologie Dynamique*, An. 14c, Nos. 10-11-12, 1963, p. 153-59. [The Quaternary sequence conformably follows the Pliocene with Ross, Porika, Wainanga, and Otira glaciations. The whole length of the Quaternary was probably as much as 5 million years.]
- UNDÄS, I. When were the heads of the Hardangerfjord and the Sognefjord ice-free? *Norsk Geografisk Tidsskrift*, Bd. 19, Ht. 5-6, 1963-64. [pub.] 1964, p. 291-95. [The great terrace Moen at Øvre Årdal was deposited in the Boreal-Atlanticum transition and the first part of Atlanticum. Lærdal was ice-free before Øvre Årdal.]
- VARJO, U. Über finnische Küsten und ihre Entstehung (unter besonderer Berücksichtigung der Bildungen ihrer trockenen Zone). *Fennia*, 91, No. 2; *Publicationes Instituti Geographici Universitatis Ouluensis*, No. 3, 1964, 104 p. [Includes section on the influence of ice, active and passive, on the development of the coast-line.]
- WILSON, C. B., and HARLAND, W. B. The Polarishreen Series and other evidences of late Pre-Cambrian ice ages in Spitsbergen. *Geological Magazine*, Vol. 101, No. 3, 1964, p. 198-219. [Polarishreen Tillite Formation correlates with the neighbouring Sveanor Formation of Nordaustlandet and with other tillites in Vestspitsbergen. They are regarded as a product of the great Infra-Cambrian Ice Age and are correlated with world-wide tillite horizons of this age.]
- WRIGHT, H. E. The classification of the Wisconsin glacial stage. *Journal of Geology*, Vol. 72, No. 5, 1964, p. 628-37. [Proposal to consider the 9,000-year retreat of ice from its Wisconsin maximum under four glacial phases: Tazewell, Cary, Port Huron (Mankato) and Valdres.]
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- GOŹDZIK, J. S. L'étude de la répartition topographique des structures périglaciaires. *Biuletyn Peryglacjalny* (Łódź), Nr. 14, 1964, p. 217-49. [Study of relation between topography and periglacial structures in Poland.]
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SNOW

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In TABLE I, at point A₁ the second value of b_2 in the ϵ_{45} column should read $b_2 = +0.353$, not $+0.357$.

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In TABLE II the following corrections should be made in the values for the average strain-rates at the points A₁ and A₂: $\epsilon_{xy} = +0.021$, not 0.041 ; $\epsilon_2 = -0.26$, not -0.22 ; $\epsilon_3 = -0.05$, not -0.09 .