GLACIOLOGICAL LITERATURE

This selected list of glaciological literature has been prepared by J. W. Glen with the assistance of T. H. Ellison, W. B. Harland, Miss D. M. Johnson, and the Staff of the Scott Polar Research Institute. Its field is 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. Glen of publications of glaciological interest.

General glaciology

Bauer, A. Commentaires de stéréogrammes des glaciers du Groenland. *Société Française de Photogrammétrie Bulletin*, No. 3, 1961, p. 18–24. [Analysis of what can be deduced from eleven stereographs.]

Grosval'd, M. G., *and others*. Predvaritel'nyye nauchnyye rezul'taty glyatsiologicheskikh issledovaniy na Zemle Frantsa-Iosifa (1957–1959) [Preliminary scientific results of glaciological studies in Zemlya Frantsa-Iosifa (1957–59)]. *Materialy Glyatsiologicheskikh Issledovaniy. Khronika. Obsuzhdeniya* [*Glaciological Observations. Chronicle. Discussion*], Vyp. 2, 1961, p. 19–45. [Work on I.G.Y. programme in Ostrov Gukera. Papers by M. G. Grosval'd and A. N. Krenke, O. N. Vinogradov, V. A. Markin, N. G. Razumeyko, V. L. Sukhodrovskiy, M. G. Grosval'd and T. V. Psareva.]

Lapina, I. Ya. O publikatsiyakh sovetskikh rabot po Antarktike, 1956-may 1960 g. [Publication of Soviet works on the Antarctic, 1956 to May 1960]. *Antarktika. Doklady Komissii 1960 g.* [*The Antarctic. Reports of the Commission, 1960*] (Moscow), No. 1, 1961, p. 61–85. [Bibliography.]

Péguy, C.-P. Le développement actuel des études glaciologiques dans le monde. *Revue de Géographie Alpine*, Tom. 50, Fasc. 2, 1962, p. 213–27. [Historical survey, with particular reference to the work of the Commission des Neiges et Glaces.]

Glaciological instruments and methods

Baussart, M. Les procédés de mesure de la vitesse des glaciers par photogrammétrie. *Société Française de Photogrammétrie Bulletin*, No. 3, 1961, p. 3–9. [Discussion of various photogrammetric methods of measuring glacier velocity.]

Carbonnell, M. Application de la méthod d'aérocheminement à la détermination de la vitesse superficielle de glaciers du Groenland. *Société Française de Photogrammétrie Bulletin*, No. 3, 1961, p. 10–14. [Measurement of velocity of Jakobshavns Isbræ, Greenland.]

Krasnushkin, A. V. Opredeleniye ob"yemnogo vesa snega, firna i l'da metodami radioaktivnogo karotazha [Determination of snow, firn and ice density by radioactive coring methods]. *Merzlotnyye Issledovaniya* [*Permafrost Studies*] (Moscow University), Vyp. 2, 1961, p. 147–56. [New method for determining density used by Fourth Soviet Antarctic Expedition.]

Orlov, N. I. Novyy metod izmereniya perenosa snega [New method of measuring blowing snow]. (*In* Akademiya Nauk SSSR. Institut Geografii. *Rol' snezhnogo pokrova v prirodnykh protsessakh* [*Rôle of snow cover in natural processes*]. Moscow, Izdatel'stvo Akademii Nauk SSSR [Publishing House of the Academy of Sciences of the U.S.S.R.], 1961, p. 258–64.) [Apparatus using a photocell.]

Philberth, K. Une méthod pour mesurer les températures à l'intérieur d'un inlandsis. *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* (Paris), Tom. 254, No. 22, 1962, p. 3881–83. [Suggested apparatus for self-drilling temperature probe suitable for great depths in an ice sheet.]

Picciotto, E. Notes on isotope glaciology. *Polar Record*, Vol. 11, No. 71, 1962, p. 206–08. [Methods for age determination and for interpreting variations in the ratio of stable isotopes in ice.]

Vyalov, S. S., *and others*. Metodika ispytaniy merzlykh gruntov na szhatiye i sdvig s uchetom polzuchesti [Method of testing the compressive and shear strengths of frozen ground, with consideration of creep]. [By] S. S. Vyalov, N. K. Pekarskaya [and] E. P. Shusherina. *Merzlotnyye Issledovaniya* [*Permafrost Studies*] (Moscow University), Vyp. 2, 1961, p. 165–88.

Yakupov, V. S. Vozmozhnosti elektrorazvedki v usloviyakh mnogoletney merzloty [Potentialities of geoelectric exploration in permafrost regions]. *Razvedka i Okhrana Nedr* [*Exploration and Conservation of Mineral Resources*], Tom 26, No. 10, 1960, p. 29–32. [Method of detecting presence of frozen ground.]

Physics of ice

Bolling, G. F., *and* Tiller, W. A. Growth from the melt. III. Dendritic growth. *Journal of Applied Physics*, Vol. 32, No. 12, 1961, p. 2587–605. [Theory of dendritic growth compared with observations on, among other things, ice.]

Chalmers, B. *The growth of ice in supercooled water*. Philadelphia, American Society for Testing and Materials, 1961. 9 p. (Edgar Marburg Lecture, 1961.) [General account of nucleation and growth of ice in supercooled water and its application to ice lens formation in soil.]

Cohan, N. V., *and others*. Electrostatic energies in ice and the formation of defects, by N. V. Cohan, M. Cotti, J. V. Iribarne, M. Weissmann. *Transactions of the Faraday Society*, Vol. 58, No. 471, 1962, p. 490–98. [Theoretical calculation.]

DANTL, G. Wärmeausdehnung von H_2O- und D_2O-Einkristallen. *Zeitschrift für Physik*, Bd. 166, Ht. 1, 1962, p. 115–18; Bd. 169, Ht. 3, 1962, p. 466. [Measurement of single crystal thermal expansion coefficients of H_2O and D_2O from 18° K. to the melting point. At low temperatures the coefficients become negative.]

FLETCHER, N. H. Surface structure of water and ice. *Philosophical Magazine*, Eighth Ser., Vol. 7, No. 74, 1962, p. 255–69. [Model of water surface shows that ice can be expected to have a water layer of finite thickness above −30° C.]

HEINMETS, F. Direct measurements of proton mobilities in protonated ice. *Nature*, Vol. 188, No. 4754, 1960, p. 925–27. [Experiments show that proton mobility is much less than has previously been suggested.]

HEINMETS, F. Measurement of ice–liquid interphase potentials in protonated and hydroxylated electrolytes. *Transactions of the Faraday Society*, Vol. 58, No. 4, 1962, p. 788–94. [Detailed study of electrical potential at ice–liquid boundary.]

HOFFER, T. E. A laboratory investigation of droplet freezing. *Journal of Meteorology*, Vol. 18, No. 6, 1961, p. 766–78. [Study of effects of various nuclei.]

HOTELLIER, M.-N., *and* KAHANE, A. Variation de la biréfringence de la glace en fonction de la température. *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* (Paris), Tom. 254, No. 2, 1962, p. 246–48. [Variation of birefringence of ice from 0° C. to −195° C. Marked change below −100° C. attributed to reduction of degeneracy in Pauling's model.]

KÄSS, M., *and* MAGUN, S. Zur Überhitzung am Phasenübergang festflüssig. *Zeitschrift für Kristallographie*, Bd. 116, Ht. 3–6, 1961, p. 354–70. [Experimental study of nucleation of Tyndall figures.]

KLIYA, M. O. K voprosu o zalechivanii treshchin v kristallakh l'da [The healing of cracks in ice crystals]. *Kristallografiya* [*Crystallography*], Tom 4, No. 2, 1959, p. 263–65. [Observations of closing of cracks filled with water vapour. English translation in *Soviet Physics. Crystallography*, Vol. 4, No. 2, 1960, p. 244–47.]

KNIGHT, C. A. Curved growth of ice on surfaces. *Journal of Applied Physics*, Vol. 33, No. 5, 1962, p. 1808–15. [Study of orientation relations in the curved dendritic growth on the walls of a container of supercooled water.]

LAVROV, V. V. O kharaktere raboty l'da pod nagruzkoy [The behaviour of ice under a load]. *Zhurnal Tekhnicheskoy Fiziki* [*Journal of Technical Physics*], Tom 32, No. 1, 1962, p. 101–05. [Deflection of ice beams in bending.]

LYUBOMIROVA, K. S. Nekotoryye osobennosti zatukhaniya solnechnoy radiatsii v tolshche l'da [Characteristics of attenuation of solar radiation in ice]. *Izvestiya Akademii Nauk SSSR. Seriya Geofizicheskaya* [*News of the Academy of Sciences of the U.S.S.R. Geophysical Series*], 1962, No. 5, p. 693–99. [Measurements on clear ice and river ice.]

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PAPÉE, H. M. The role of activated salts in ice nucleation. *Zeitschrift für Angewandte Mathematik und Physik*, Vol. 13, Fasc. 2, 1962, p. 186–95. [Detailed study of mode of action of ice nuclei.]

SCHULZ, H. Die mechanische Relaxation in Eis-HF-Mischkristallen verschiedener HF-Konzentration. *Naturwissenschaften*, Bd. 48, Ht. 22, 1961, p. 691. [Study of mechanical relaxation of ice-HF mixed crystals shows that the HF affects the activation energy.]

SERPOLAY, R., *and* TOYE, M.-J. Formation de whiskers de glace sur des particules d'oxyde ferrosoferrique. *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* (Paris), Tom. 254, No. 24, 1962, p. 4187–89. [Study of formation of whiskers of ice on Fe_3O_4.]

STENE, J. K., *and* FONTAINE, W. E. Discussion of some strength characteristics of ice at the interface. *Ashrae Journal*, Vol. 3, No. 12, 1961, p. 44–49. [Experiments on adhesion of ice.]

WAKAHAMA, G. On the plastic deformation of ice. I–IV. *Low Temperature Science*, Ser. A, No. 20, 1962, p. 57–75, 77–100, 101–16, 117–30. [Constant strain-rate and stress relaxation experiments on ice single crystals from the Mendenhall Glacier. Analysis of the results in terms of a dislocation mechanism.]

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LAND ICE. GLACIERS. ICE SHELVES

AGIBALOVA, V. V., *and* VILENKIN, V. L. Gergetskiy Lednik [The Gergetskiy glacier]. *Izvestiya Vsesoyuznogo Geograficheskogo Obshchestva* [*News of the All-Union Geographical Society*], Tom 93, Vyp. 4, 1961, p. 330–34. [Description of changes in last 80 yr. of this Caucasian glacier.]

BAUER, A. Interprétation des résultats obtenus sur les vitesses des glaciers du Groenland. *Société Française de Photogrammétrie Bulletin*, No. 3, 1961, p. 15–17. [Greenland glacier velocity results used to estimate loss by calving.]

BAUSSART, M. Étude photogrammétrique de l'évolution des glaciers du massif du Mont Blanc. *Société Française de Photogrammétrie Bulletin*, No. 3, 1961, p. 25–33. [Study of variations of glaciers round Mont Blanc based on aerial photographs taken in 1939, 1952 and 1958.]

BHATTI, A. K. Glaciers and the Indus Basin. *Indus*, Vol. 2, No. 12, 1962, p. 29–32. [Survey of glaciers from point of view of their effect on run-off.]

BONE, R. M. A note on the Kashka-Tash glacier of the Caucasus, U.S.S.R. *Geographical Bulletin*, No. 16, 1961, p. 40–44. [General description of this glacier and its retreat since 1927.]

CRARY, A. P., *and others*. Glaciological regime of the Ross Ice Shelf, by A. P. Crary, E. S. Robinson, H. F. Bennett and W. W. Boyd, Jr. *Journal of Geophysical Research*, Vol. 67, No. 7, 1962, p. 2791–807. [Observations between 1957 and 1960 collected and analysed. Maps of ice thickness, ocean-floor depth, snow surface density, mean temperature, mean annual accumulation. Flow paths of ice particles deduced.]

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KOBLENTS, YA. P., *and* KRUCHININ, YU. A. O dinamike fronta shel'fovykh lednikov vostochnoy Antarktidy [Dynamics of ice fronts of eastern Antarctica]. *Problemy Arktiki i Antarktiki* [*Problems of the Arctic and Antarctic*], 1961, No. 9, p. 67–74. [Movements of seaward edge of six ice shelves between long. 15° E. and 150° E.]

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LOEWE, F. Glaciers of Nanga Parbat. *Pakistan Geographical Review*, Vol. 16, No. 1, 1961, p. 19–24. [Comparison with previous observations.]

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PLANHOL, X. DE, *and* BILGIN, T. Glaciers actuels, limite des neiges persistantes et dépression quaternaire de la limite des neiges dans le massif du Karagöl, chaînes pontiques, Turquie. *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* (Paris), Tom. 254, No. 9, 1962, p. 1659–61. [General description of glaciers and snow cover in this area of Turkey.]

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BETIN, V. V., *and* SHIROKOV, K. P. Opredeleniye elementov dreyfa l'dov v more s samoleta [Aerial determination of the elements of sea ice drift]. *Trudy Gosudarstvennogo Okeanograficheskogo Instituta* [*Transactions of the State Oceanographical Institute*], Vyp. 63, 1961, p. 64–77. [Method and observations in Gulf of Finland.]

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ERRATUM (Vol. 4, No. 34, p. 489)

The photograph of the ice "stalagmite" was taken in April 1962, and not in June as stated.