3. Field Work in the Arctic and Antarctic

General glaciological research along classical lines.

Application of new or improved methods of research, developed and tried on alpine glaciers.

REFERENCES

1. Blümcke, A. and Hess, H. Zeit. Gletscherkunde, Vol. 13, 1925.

- 2. Finsterwalder, S. Der Vernagtferner. Wissenschaftliche Ergänzungshefte D. Oe. A.V., Vol. 1, No. 1, 1897,
- 3. Somigliana, C. The Viscosity of Glacier Ice and the Determination of the Depth of Glaciers, reported by S. Finsterwalder in Zeit. Gletscherkunde, Vol. 15, 1927. (See also Rend. R. Acad. Linc. Math. Phys. Class 30, 1921.)

4. Weinberg, S. Zeit. Gletscherkunde, Vol. 1, 1906-7, p. 322.

5. Lagally, M. Mechanik u. Thermodynamik d. stationären Gletschers, Leipzig, 1934, p. 94. Zeit. Gletscher-kunde, Vol. 18, 1930, pp. 1-8.

- 6. Brockamp, B. and Mothes, H. Zeit. Geophys. Vol. 6, 1930, pp. 148 et seq.
 7. Blümcke, A. and Hess, H. Untersuchungen am Hintereisferner. Wissenschaftliche Ergänzungshefte D. Oe.

 A.V. Vol. 1, 1899.
- 8. Perutz, M. F. and Seligman, G. A Crystallographic Investigation of Glacier Structure and the Mechanism of Glacier Flow. Proc. Roy. Soc. A, Vol. 172, 1939, pp. 335-360.
 9. Sorge, E. Glaziologische Untersuchungen in Eismitte. Wiss. Erg. d. D. Grönland Exp. Alfred Wegener,
- Band 3. Leipzig: Brockhaus, 1935.

 10. Streiff-Becker, R. Zur Dynamik des Firneises. Zeit. Gletscherkunde, Vol. 26, 1938-9, pp. 1-21.

11. Haefeli, R. Private communication.

12. Finsterwalder, R. Die Gletscher des Nanga Parbat. Zeit. Gletscherkunde, Vol. 25, 1937, pp. 57-108.

13. Höppler, F. Kolloid Zeit. Vol. 97, 1941, pp. 154 et seq.

14. Winterhalter, U. Private communication.

15. Finsterwalder, R. Zeit. Gletscherkunde, Vol. 19, 1931, p. 251. Pillewitzer, W. Zeit. Erdkunde, No. 9-10, 1938.

-16. Demorest, M. Ice Sheets. Bull. Geol. Soc. Am. Vol. 54, 1934, pp. 363-400.

17. Seligman, G. Extrusion Flow in Glaciers. Journ. Glaciology, Vol. 1, No. 1, 1947, p. 12.

18. Washburn, B. and Goldthwait, R. Movement of South Crillon Glacier, Crillon Lake, Alaska. Bull. Geol. Soc. Am., Vol. 48, 1937, pp. 1653-64.

GENERAL INFORMATION

Matthes, F. E. Glaciers: a short account in Physics of the Earth, Vol. 9; Hydrology. Ed. by O. E. Meinzer, McGraw-Hill Book Co., 1942, Chapter 5.

MEETINGS

ANNUAL GENERAL MEETING

held at the Royal Geographical Society's House, Kensington Gore, London, on Thursday, 28 November 1946 at 4.30 p.m.

23 members and 5 visitors were present

The President informed the meeting that the Minute book was available for inspection and if no objections were raised the Minutes of the last meeting would be signed in the ordinary way.

1. The President's Report. The President reported that the Snow Survey of Great Britain was now in operation. There were about 100 volunteer observers and 61 from the Meteorological Office. Valuable results were to be expected.

Membership of the Society had increased satisfactorily during the year and was now 128, 102 in the United Kingdom and 26 abroad. These figures were higher than when the Society ceased its activities at the beginning of the war.

The Journal of Glaciology had now been brought out and should result in many new members and subscribers.

2. The Society's Finances. The President said that a statement of the Society's present financial state had been circulated to all members. The full accounts for 1946 would be presented in due course. A deficit would be shown and he asked for the approval by the meeting of the Committee's proposal that the annual subscription rates be increased as follows:

| | £ | s. | d. |
|---|---|----|----|
| For members residing in the United Kingdom | I | I | 0 |
| For members in all other parts of the world | | 15 | 0 |
| For members in the United Kingdom and abroad if under | | | |
| 23 years of age or undergraduates of Universities | | 10 | 0 |

A motion to this effect was proposed by Dr. B. B. Roberts and seconded by Dr. N. E. Odell and carried unanimously.

- 3. Amendment to Rules. The President said that the proposed amendment to the Rules had been circulated to all members. He wished to put one further amendment to the meeting—the deletion of Rule 5, which stated, "Candidates shall be admitted to the Society by nomination." There were no formalities for joining the Society and the word "nomination" led to misunderstanding by candidates. The Committee considered that Rule 3, which stated, "Membership shall be open to all who are interested in the scientific or practical aspects of the study of snow and ice" was sufficient. Dr. A. J. Bull asked whether the acceptance of new members was considered by the Committee: the President replied that the decision was at present left to him alone. Dr. Bull then proposed that the amendments to the Rules and the deletion of Rule 5 be passed. This proposal was seconded by Mr. H. F. P. Herdman and carried unanimously.
- 4. Election of Officers and Committee for 1947. The President reported Mrs. Rowley's resignation from the Committee. He explained the present difficulty of arranging for a proper circulation of the personnel of the officers and members of the Committee and pointed out that the new rules had accordingly been drafted to allow the present Committee to be re-elected for the time being en bloc. The following officers and members of the Committee were therefore eligible for re-election:

Mr. G. Seligman (President)

Mr. J. M. Wordie (Vice President)

Dr. N. E. Odell

Mr. G. Manley

Dr. K. S. Sandford

Dr. B. B. Roberts

Mr. R. Moss

Mr. A. R. Glen

Mr. L. C. W. Bonacina

Mr. H. MacRobert.

In accordance with the rules the following three co-opted members resigned, but were eligible for re-election:

Professor S. E. Hollingworth Dr. M. F. Perutz

The Reverend W. L. S. Fleming.

- Dr. A. J. Bull proposed that the existing Committee and the three co-opted members be re-elected. The proposal was seconded by Mr. D. L. Champion and carried unanimously.
- 5. Appointment of Auditors. The President said that he had approached Mr. V. Lavington Evans and Major W. M. Roberts, who were willing to act as auditors. Professor Hollingworth proposed that Mr. Evans and Major Roberts be appointed auditors. The proposal was seconded by Dr. N. E. Odell and carried unanimously.
- 6. Future meetings and papers. The President announced that a joint meeting with the Royal Meteorological Society had been arranged for 19th March, 1947, at which there were to be papers and a general discussion on a climatological subject. There was also a joint meeting to be arranged between the Society and the mountaineering and ski clubs in May. There would be two more meetings for which suggestions for papers would be welcomed.
 - 7. There was no further business and the meeting was adjourned until 5 p.m.
 - 8. The President then asked Professor Hollingworth to take the Chair.

Professor Hollingworth said that he felt sure he was expressing the wishes of members in saying how grateful they were to the President for bearing so much of the burden of the Society's activities. He then introduced the lecturers:

- Dr. B. M. Cwilong—"Observations on the incidence of super-cooled water in expansion chambers and on cooled solid surfaces."
- Dr. M. F. Perutz—"Description of the Iceberg Aircraft Carrier and experiments on the bearing of the mechanical properties of frozen wood pulp upon some problems of Glacier Flow."
- Dr. Cwilong's paper and the discussion on it are given below. The paper and discussion on the Iceberg Aircraft Carrier will be published in the next issue.

OBSERVATIONS ON THE INCIDENCE OF SUPERCOOLED WATER IN EXPANSION CHAMBERS AND ON COOLED SOLID SURFACES*

By B. M. CWILONG (Oxford)

Introduction

The main object of this work was the design of a reliable dew point (or hoar frost point) hygrometer for use in the upper troposphere and lower stratosphere. The design was developed under the direction of Professor G. M. B. Dobson, F.R.S., for the Meteorological Office, Air Ministry, London.

* A short summary of the first part of this paper has already been published and a more detailed account is in course of publication (*Proc. Roy. Soc.* A). The following account is devoted to those results which have not been published and is concerned only with sublimation on cooled solid surfaces.