

## NOTES

DR. F. P. BOWDEN of the Physical Chemical Department, Cambridge University, has been elected to fellowship of the Royal Society. Dr. Bowden is an experienced mountaineer and ski-er and assisted in the organization of the Jungfrauoch Glaciological Research Party, 1937-38.

PROFESSOR F. DEBENHAM has been awarded the Victoria Medal of the Royal Geographical Society for his work in geographical education and his contributions to polar geography, to Antarctic exploration and as first Director of the Scott Polar Research Institute, Cambridge.

MR. GORDON MANLEY has been appointed to the newly inaugurated chair of geography at Bedford College, University of London.

"THE ARCTIC CIRCLE." A club with this appropriate name has been formed in Ottawa for those interested in Arctic exploration and research. The prime movers in this new venture are Mr. T. H. Manning and Lieut.-Col. and Mrs. G. W. Rowley, all members of the British Glaciological Society. Mr. Manning has recently received the Patron's Medal of the Royal Geographical Society for his explorations and survey work in the Canadian Arctic.

ARTICLES IN FOREIGN LANGUAGES. The publication of articles in foreign languages in the *Journal of Glaciology* has been under consideration. Discussion with members and subscribers in Switzerland showed that about half were in favour of this, while the others thought it barely necessary. It is felt that for the present brief abstracts of certain articles in foreign languages should suffice.

ARCHIV FÜR METEOROLOGIE, GEOPHYSIK UND BIOKLIMATOLOGIE. This new journal has been published in order to fill the gap caused by the disappearance of many scientific publications, particularly those in Germany, during the war years. It is to appear at irregular intervals and will be in two parts—Series A dealing with meteorology and geophysics, Series B with general biological climatology. Each series can be subscribed for separately. The editors are Professor Dr. F. Steinhauser, Zentralanstalt für Meteorologie und Geodynamik, Vienna, and Dr. W. Mörikofer, Physikalisch-Meteorologisches Observatorium, Davos, Switzerland. The publishers are the Springer-Verlag, Mölkerbastei 5, Vienna 1. The journal will include the climatological and physiological aspects of snow cover but probably not the study of glaciers and other glaciological subjects.

*The Glacialists Magazine.* Dr. J. N. Carruthers has sent some details of this journal, which flourished for a short time at the end of last century. It appeared in 1893 under the editorship of P. F. Kendal and was published monthly. Later issues came out quarterly and it seems to have ceased publication at the end of 1897. It contained much of interest to the glacial geologist and it is to be regretted that its life was not longer.

#### FIRST INTERNATIONAL COURSE FOR THE STUDY OF SNOW AND AVALANCHES

AN instructional course was organized in December 1947 at the Swiss Snow and Avalanche Research Station at the Weissfluhjoch, Davos.\* The instruction consisted of lectures and demonstrations dealing with physics, crystallography and meteorology as applied to snow and ice. The plastic properties and temperatures of the snow cover received special attention. Practical work in the field included the digging of snow sections and the sounding of deep snow accumulations. The dislodging of avalanches by mine-throwers and grenades was demonstrated, and rescue work

\* Eidgenössisches Institut für Schnee- und Lawinenforschung.

with the most recent equipment was carried out by members of the party. They also saw a trained rescue dog (*Lawinenhund*) at work. It found its man lying under two feet of snow within six minutes.

The course is open to scientists, ski instructors and snow experts from all countries. On this occasion it was attended by a party of twelve from Italy, Czechoslovakia, Switzerland and Yugoslavia. It appears to have been very successful and it has now been decided to hold a course every winter.

The credit of initiating the course belongs to M. C. Egmond d'Arcis, of Geneva. He is President of the International Union of Alpine Associations, under the auspices of which the course is to be continued. The British Mountaineering Council (c/o The Alpine Club, 74 South Audley Street, London, W.1.) is a member of the I.U.A.A. and details of future courses are obtainable from them.

## REVIEWS

LOSSES DUE TO EVAPORATION AND MELTING OF THE ALPINE SNOW COVER PRIOR TO SPRING THAW. O. KIRSCHMER and K. RIMKUS. Field Information Agency Technical, United States Group, Control Council for Germany, Publication No. 1008.

THIS report gives details of a series of experiments carried out in the Bavarian Alps by Drs. Kirschmer and Rimkus of the *Forschungsinstitut für Wasserbau und Wasserkraft* in Munich. The apparatus used was a specially designed snow-balance which was built in a pit. The "pan" of the balance consisted of a sampling table (6.25 m.<sup>2</sup>) exactly level with the surface of the ground. The table was insulated from below and so arranged that the melt water could run through a pipe into a sampling vessel also standing on the balance. The authors claim that with this instrument they have, so far as is possible, reached natural conditions for evaporation and melting.

The weight of the snow on the table together with the melt water was measured every day at 7.30 a.m. Measurements were usually made only on days without precipitation, when conditions for evaporation were most favourable.

If the weight of the snow on the table one day is  $W_1$  and 24 hours later  $W_2$ , then

$$W_1 = W_2 \pm G$$

where  $+G$  represents the evaporation which has taken place,  $-G$  the condensation during the same interval.

The authors found that only an extremely small and practically negligible amount of snow was evaporated during the seven winters (1937-38 and 1944-45). The condensation was also quite small. They also found that throughout all the winters, independently of temperature, the snow cover was melting from below, which means that there is a run-off of melting water during the whole winter. From this they conclude that the common conception, that the snow will keep its water content until the spring thaw, is wrong, since an appreciable amount of water had run off during the cold season.

These experiments are interesting, especially from a hydrological viewpoint, but one would have liked them to have been carried out in conjunction with meteorological observations. We know from many experiments that under special conditions evaporation from snow can be considerable. G. Seligman, for instance, in his book *Snow Structure and Ski Fields*, Chapter 5, has discussed his own experiments and reviewed some others which certainly show that evaporation under special circumstances is very high. We also know on theoretical grounds that evaporation can only take place if the vapour pressure is decreasing from the snow surface upwards. If the opposite is the case condensation will occur.