A. Dauvillier. Sur l'origine de l'ozone atmosphérique. Recherches faites au Scoresby-Sund durant l'année polaire, id. p. 1339.

A. Dauvillier. Activité cosmique et activité solaire. Observation des rayons cosmiques au Scoresby-Sund pendant l'année polaire, id. p. 1741.

British Polar Year Expedition 1932/33. Mr. I. M. Stagg's Report.

The six members of the British Polar Year Expedition to Fort Rae near the northern extremity of the Great Slave Lake in North Western Canada have now returned to England.

Broadly the aim of the Expedition was to carry out a pre-arranged programme of observational work in the four main branches of geophysical investigation included under the headings of meteorology, terrestrial magnetism, aurora and atmospheric eletricity. With a minimum personal of five observers and one steward-mechanic our whole energies were bent to maintaining continuous observations by eye and by self-recording instruments of all the constituent elements in the four fields of investigation, with the ultimate end that the results and records gathered from at least a year's stay in that region should be strictly comparable with those from the stations of all the other countries participating in the same international programme of Polar Year activities.

After arrival at Rae a very concentrated six weeks' effort saw most of our instruments installed in the mudded log huts which formed our observatory buildings, and we were ready to start the programme of duties on August 1. st. 1932, the offical date of commencement of the co-operative activities of all the similar stations around the polar cap. Once started all the work had to be carried on without intermission till 31st August 1933, and as the season advanced, with rapidly falling temperature after mid-September, each day brought new problems for solution and the lengthening hours of darkness steadily increased the duration of the continuous auroral watch. Already in August we were making use of our wireless transmitting apparatus for communicating with a substation established sixteen miles down the Lake, to let us take instantaneous photographs of aurora for height determinations. When the Lake had frozen, we erected a telephone line to ease the problem of speedy two-way communication between the two stations. By December, in addition to the maintenance of about twenty self-recording instruments at the Main Base making continuous records of the main elements in meteorology, terrestrial magnetism and atmospheric electricity, our auroral watch could be relied on to keep the members of the party working busily and continuously in shifts form four o'clock in the afternoon till nine next morning.

Throughout the term of our stay at Rae it seemed that seldom a day passed but some modification in instrumental technique or change in observational routine were called for by the unusual conditions in which

we worked. The telephone line down the open lake and through the bush behind the main base and substation would break and have to be put right before auroral photography at the two stations could be effectively continued: the clocks of the recording instruments would go out of commission in rapidly rising as well as rapidly falling temperature: the electric light installation for the photographically recording magnetic instruments would fail in some constituent either through the engine-generator refusing to be started because of the cold or, on occasion, through loose husky sleigh dogs finding the insulation of our cable wires a temporary but presumably indigestible variant from their more customary caribou diet: meteorological ballons in batches would decide to burst at awkwardly low heights before sufficient theodolite readings had been made and so necessitate further manufacture of hydrogen with all the contingent inconveniences that entailed with the experimental apparatus we had. Then, too, there were the little unforeseen troubles arising from the situation of our station far removed from open water during the winter months with the effect of making the air continuously and extremely dry. Electrical instruments which for their proper function in required a good conductor to earth picked up charge on the least provocation; paper for photographic recording became so brittle after development and drying, that it could not be handled without grave risk of cracking and tearing; instrument which recorded by inked pens far too frequently wanted to become dry when no one happened to be looking and pieces of our apparatus with wooden constituents in their make-up were sometimes so unmanageably distorted as to require frequent overhaul.

In one way or another most of these little difficulties were circumvented so that the Expedition has returned with very complete records in all branches of the work. We have hourly values of all the meteorological elements for thirteen (and in many cases fourteen) calendar months, along with upper air data from about 450 pilot balloon ascents, in many of which heights well over twenty thousand feet were attained. In addition we already have two records of temperature and pressure well into the stratosphere over Rae at mid-winter when the surface air temperature was about 25 ° F. below zero and there is hope that with the arrangements that have been made with the detachment of the Royal Canadian Mounted Police and, through them, the Indians, more of the autographic upper air instruments which we sent up will yet be found. The records and observations in terrestrial magnetism are also complete except for a day or two when light inadvertently got into the undeveloped photographic charts, and though the year as a whole seems to have been a poor one for auroral displays, the proximity of Rae to the zone of maximum auroral frequency allowed us to get some 4700 double photographs of aurora from many of which height determinations of aurora will be made. In the more obscure field of atmospheric electricity, except for or one two short

periods when the instruments went uncontrollably awry, there are continuous records of the potential gradient near the earth's surface in addition to daily observations of the air-earth current, ion density and Aitken nuclei, supplemented by further observations made at intervals throughout the year on the rate of formation of ions over the rock and ice at Rae.

Until the winter of 1930—31 this protracted winter, along with the isolated position of Rae off the Mackenzie River line of trading stations, meant that Rae was one of the most unfrequented of the Hudson's Bay Company's outposts in North-Western Canada. But in 1930 finds of pitchblende and gold in the south east corner of the Great Bear Lake some 250 miles north of Rae brought in prospectors and miners by plane using Rae as an intermediate point of call and since mining enthusiasm continued in that locality during the period of our occupation we enjoyed the questionable benefits of postal contacts with the outside world whenever planes came through.

Our life at Rae was mainly unexciting. Except during a few of the fifteen months we were at the station, our observational routine required some duty at every hour of the day. With one of six of our party devoting his whole time to cooking and general assistance and at intervals with one, sometimes two, occupying the substation for auroral photography and magnetic observations, there were frequently only three observers available for maintaining the instrumental and observational routine at the main base. There was therefore little scope for distractions in the way of hunting for the moose and caribou which for many months provided our only change from the canned and dried foods we took out from England.

J. M. Stagg.

Buchbesprechungen.

Elmar Drastrup: Grönlandjäger. Verlag Scherl, Berlin. Ganzleinen. 4 RM.

Elmar Drastrup hat als Jäger ein Jahr in dem unbewohnten Nordost-Grönland als Angehöriger der dänischen Fanggesellschaft „Nanok" zugebracht. Begeisternde Worte findet er über den gewaltigen Eindruck, den die Polarnatur zum ersten Mal auf den Menschen ausübt. Wir lernen verstehen, daß diese rauhen, beherzten Männer es auf die Dauer nicht mehr in der Behaglichkeit südlicher zivilisierter Gegenden aushalten, daß es sie immer und immer wieder mit magnetischer Gewalt zurück zur Arktis lockt. S. V.

J. Georgi: „Im Eis vergraben". Verlag des Blodigschen Alpenkalenders, Paul Müller, München 2 NW. 8.

Das Buch enthält, wie auch der Untertitel angibt, die Erlebnisse auf Station „Eismitte" der letzten Wegnerschen Grönland-Expedition. Der Verfasser, Leiter der Station „Eismitte", berichtet zunächst über die Geschichte Grönlands, über die Wegnersche Expedition und widerlegt u. a. den erhobenen Vorwurf, daß er die Schuld am Tode Wegeners trage. Ausgezeichnet ist der Hauptteil des Buches, — eben die Erlebnisse auf Eismitte —, da Georgi uns die täglichen kleinen Sorgen und Schwierigkeiten näherbringt, phsychologisch das Wesentlichste einer Expedition. Die gewählte Form der Tagebuchaufzeichnungen ist außerordentlich wirklichkeitsnah. Im ganzen eine wertvolle und entscheidende Bereicherung der deutschen Polarliteratur. Z.