

"April 12th.—Ther. —21°. Constant strain on the eyes in trying to distinguish "the good leads ; not able to see without pain."

The Western sledging party under Lieutenant Aldrich left the "Alert" on the same day as Captain Markham's party, and was subject to similar privations :—

On the 11th April—eight days after starting—the following entry occurs in Lieut. Aldrich's Journal :—"Every one has eaten a full pannican of pemmican to-night for the "first time, their appetites having failed them for eight days." The same low temperature, sleeplessness and discomfort to which Captain Markham's men were subjected, were experienced and suffered by this party likewise.

By this it will be seen that the work which these sledge parties underwent was excessive and out of proportion to the exercise they had taken during the winter months ; compared with which, the winter months may be termed a period of comparative inaction.

Every one of the sledge parties tells of the very great amount of fatigue he underwent. It was not simply the work of dragging the sledge : to have dragged a load which averaged more than 200 lbs. for each man over smooth ice and hard snow, would have proved a labour of itself, but to drag this weight over the rough ice, and the hummocks and snow they encountered, increased the work and made it one of distress.

One of the captains of the sledges, a petty officer, describes this work as the hardest he had ever endured : "The snow," he says, "was that deep that you sank "right down through it, and you had to pull your leg out of the same hole again, and "to take the next step in a similar way ; and the sledge would bury itself into it, and "the snow drifted here and there, heaving it up into hillocks ; you had to drag your "sledge over it, or cut through it by means of pickaxe and shovel (7821)." These hummocks varied from 10 to 15 feet in height, and it took two or three hours to cut a road over them (7824, 7827).

Other distressing circumstances were in operation towards lowering the physical energies of the men ; many suffered from thirst, but being warned against eating snow, they preferred to endure this inconvenience ; while the perspiration caused by the forced work, and which froze upon them on encamping or on standing still for any time, and which the heat of their bodies was not always able to thaw, was another source of discomfort. "The perspiration found its way through the drawers into the lining of "the trousers, and the flaps of the duffle trousers were frozen so hard in consequence "of the moisture, that we were unable for some days to button them " (717).

The excessive cold and fatigue combined took away their appetite, and prevented them from enjoying that amount of sleep which, in their circumstances, was an absolute necessity ; in spite of the great fatigue which their work entailed, they "preferred work "to lying in their cold sleeping bags" (746).

In the enumeration of these causes we have many depressing influences at work at the same time in men who had passed a winter under adverse circumstances, and who consequently were not "in the same vigorous condition that they would have presented "after a season spent under more genial circumstances."

It is important that these circumstances should be taken into consideration before forming an opinion as to the sufficiency of the diet consumed by the men during the sledging expeditions ; for it is necessary that a proper relation should be maintained between the amount of work and the dietary, and this relationship is subject to modification according to the quality and variety of the food, to the activity or completeness of the process of nutrition, and to the conditions, other than work, to which the individual subsisting on the dietary is subjected.

The examination by the Committee of the chief foods contained in the sledge dietary has already been stated to have shown that their quality is undoubtedly good (also Appendix, No. 23). Variety was necessarily curtailed by the exigencies of sledging, but it was to some extent obtained by the presence of both pemmican and bacon, and of two descriptions of the former on the diet list.

On the other hand, the evidence and sledge journals appear to show that the fatigue and exposure undergone, and to some extent the novelty of the food, diminished appetite, at any rate during the earlier days of travelling (729, 961, and extracts from Journals quoted above).

Further, it is a well ascertained fact in dietetics that exposure to great cold modifies the food requirements of individuals. During the performance of a given amount of work, a much larger quantity of food is required in very cold than in temperate or warm climates, the difference being used in maintaining the temperature of the body at its normal point. In order that this may be accomplished in the presence