

Capt. Sir G.
S. Nares.
R.N., K.C.B.,
F.R.S.

11 Jan., 1877.

always complained of weariness and cold in the afternoon, our men, after the ration of tea, have been unanimous in their opinion that they could work harder and for a longer period after their luncheon than before.

196. Do you attribute those bad effects to the spirits taken at the luncheon?—I can only compare the effects of the two; I myself used to feel weary after the luncheon on rum, and I certainly was invigorated by the luncheon on tea.

197. In your own person you would give the preference to tea?—I most certainly would, except on account of the long halt which it renders necessary, which is a very serious consideration.

198. What is the special inconvenience that arises from a halt?—After a halt of perhaps a quarter of an hour to twenty minutes the cold is felt very severely, and the men are obliged to walk up and down to keep themselves at all warm; the labour of dragging the sledge being sufficient to make them perspire very freely, but while merely walking they cannot keep themselves warm.

199. Do you travel by night or by day?—We travel by day as long as the sun will allow us to, but immediately it is high enough to produce snow blindness, then a change is made to night travelling; and at about the same season a change is also of advantage by the sun being high enough during the halt at noon to dry up the wet foot gear while the travellers are sleeping.

200. Although there have been some sledge parties which have been able to effect an amount of work in the arctic seas without any provision of lime juice, returning to their ship without having had any scorbutic symptoms, the universal opinion of those who have given thought to the subject is, that it is an essential in arctic service to ward off an outbreak of scurvy; is it not, in your opinion, a matter of moment to do away, in all future arctic travelling, with the ration of spirits, and in its stead to substitute that of lime juice?—I would certainly not do away with the present small ration of spirit, although I would recommend a ration of lime juice. But there would be no necessity for doing away with any of the present scale of diet if sledge parties were only to be absent from their ship during the months of May and June, that is, for about sixty days. If it is necessary to employ a sledge in the very cold weather, during the early spring, then those men should not be employed up to the end of June, and they could afford to carry their lime juice ration if the other disadvantages connected with its thawing could be done away with.

201. I understood you to say that there was a craving for lime juice amongst the men travelling; do you not consider this a proof of a want in the system for this article?—Certainly. I think that the extra craving which we all had proved that its use was beneficial.

202. With regard to the late travelling which you mentioned, would it have been safe to start men off on the pick of ice when there was more chance of the ice breaking up?—The limit of the season for sledge travelling is governed by the date of the thaw, not by the movement of the ice, except in peculiar parts. The thaw commences between the middle and the end of June, by which time all the men should be on board or in a position where they can rest for that week. Then afterwards, in July, there is very little trouble beyond the wetting of the feet that is occasioned, but this, again, has always had bad effects on the travellers.

203. (*Admiral Inglefield.*) In what way did the victualling of your sledge parties differ from that of previous travellers, say those of M'Clintock and the late Lieutenant Meham, both of whom I believe made the longest recorded journeys with a sledge in the searching expeditions for Sir John Franklin?—The first sledge journey was undertaken by the late Sir Edward Parry. I cannot state the ration that was employed in 1821; but he started on the 1st of June, returning on the 15th: after having experienced an outbreak of scurvy on board the ship during the winter he mentions travelling with no lime juice

whatever. I see he carried 1 lb. of bread and two-thirds of a pound of preserved meat. In 1822 there were a few short journeys, but in that expedition no salt meat whatever was supplied to the expedition; but owing to the very sudden outbreak of scurvy at the end of his second summer, he was forced to return to England, against his previous intentions. In his third voyage, from Spitzbergen towards the North Pole, no mention is made of carrying lime juice, but the whole of his party returned debilitated after an absence of sixty-one days, and mention is made of their gladness at finding lime juice at Table Island depôt, the first land they struck. The next long journey was Sir James Ross's, 1848-49, when, starting on the 15th May, the sledge parties returned, after thirty-seven days. I cannot state exactly upon what rations, but lime juice was carried; they experienced, however, a similar outbreak to ours. The next published accounts are those of the expedition under Sir Horatio Austin, when a quarter of an ounce of lime juice was intended to be carried, but whether it was used during the month of April I cannot now ascertain, but certainly a certain quantity of it was left in depôt, where it would not have been left had it been capable of being used during the month of April. The same year the south part of Wellington Channel was explored by the officers and men under the command of Captain Penny, using naval provisions, although in consultation with Captain Austin, he did not carry lime juice on any of the sledges. The next expedition was under Admiral Sir Richard Collinson, when I know that the "Investigator's" sledge parties were not supplied with lime juice; after that I come to my own experience on board the "Resolute," employed in Sir Edward Belcher's expedition, during which time the sledge parties were constantly at work for the first and second seasons, and the powers of the men were very severely taxed. The ration used then was precisely similar to the one adopted by myself, and in fact led to its adoption. The crews generally returned fit for work after perhaps two or three days' rest; and when the late expedition started from England it was not generally known that the men who had been employed on sledging journeys and with similar rations to ours had been very severely taxed with regard to their health. But after a careful comparison now, I may state that I am certain that all were very severely attacked, and that what is reported in the official papers as being an attack of debility was most decidedly the same as our attack by a more advanced form of scurvy, and had our men returned after about thirty days' travelling we should probably have officially reported that merely a slight attack of debility had been experienced.

204. Then I gather from your reply that you took the rations adopted by M'Clintock and Meham to regulate your own supplies to the sledge expeditions dispatched under your orders?—They are precisely similar to the rations used by those two officers.

205. (*Admiral Collinson.*) Did Sir Leopold M'Clintock provide you with a slight modification of the equipments rendered to you in consequence of the introduction of stearine as a fuel, which was not known before?—Stearine was used throughout Sir Edward Belcher's expedition. That supplied to the late arctic expedition was prepared under the direction of Sir Leopold M'Clintock; and he may have altered the ingredients for its formation somewhat, but not to my knowledge; and the same quantity of the article with which we were supplied for cooking was necessary on former occasions; and, therefore, I conclude that we had the same article to all intents and purposes.

206. Did Sir Leopold M'Clintock give you a list of the sledge equipments which he thought would be best for you to adopt?—Merely privately; he had nothing whatever to do with the responsibility of the ration used on my sledges.

207. You did not recognise that document, then, as a public one?—Most certainly not.