

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

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men, but not as a general issue; there was not sufficient for that on board the "Alert."

47. Why was not scurvy grass collected and used in the previous year 1875?—On our arrival at winter quarters on the 1st of October, the vegetation had long previously died off.

48. When did you commence to use the mustard and cress?—Not being a general issue, I must refer the Committee to the medical officer.

49. Was it your custom to give the men a hot midnight meal while working the ship through the ice?—All the men who were exposed, such as quartermasters and look-out men, had tea or coffee; and, had they wanted it, could have obtained meat, but not in a warm state. On such nights, when the crew generally were exposed, they also obtained an extra meal.

50. I think you have not made any reference to the issue of beer to the ship's crew. Had not the officers beer of their own private stores in greater quantities, in fact *ad libitum*, compared to the men?—In consequence of the "Valorous" accompanying the expedition to Disco, the officers could carry a private stock as far as that port, but after leaving Disco there was certainly no private stock of beer on board belonging to anyone.

51. Could you say how often beer was issued to the ship's crew?—When a cask of beer was opened it was issued with a reference to the preservation of the remainder, and an interval occurred in the issue of beer between the different casks, so that the issue of beer throughout the commission was not regular.

52. With reference to the immunity of the officers from scurvy compared to the men, was it not the case that the officers had a much greater variety of food by the use of soups, puddings, pies, &c., which it would have been impossible for the men to have had?—Speaking in general terms, the officers had very little supply of extra fruits; their stock admitted only of sardines, salmon, and such articles for use at breakfast, and therefore their food was changed to that extent, but that only. Indeed I think they had no preserved fruits, the Government supply being known previous to our leaving England to be very large.

53. To what use was the officers' private store-room applied?—Speaking of the "Alert," the store-rooms were the same as had been used whilst the ship was employed as a man-of-war; and, with the exception of wine in the spirit-room, which is usually allowed in a man-of-war, no other private stores beyond those already mentioned were carried, except, perhaps, what the officers carried in their own cabins.

54. Then I understand the officers' store-rooms were used for the ship's general use?—No, I have not stated so. The small officers' store-room was filled with their own stores, as is usual.

55. (*The Chairman.*) Proceeding to the 3rd paragraph: "I attach the greatest possible importance to the daily administration of lemon juice, to commence the day after the fresh vegetables cease on leaving England, but this must be carried out on the most rigid principles on which it was, without one day's interruption, carried out on board the "Investigator" on my representation of its absolute necessity, namely, by having the aggregate allowance of acid of one ounce per man, with a proportionate quantity of sugar and water mixed in a tub, and drunk on deck in the presence of the officers of the watch. I cannot overrate the importance that I attach to the adoption of a similar course in the present expedition, and would urge its being carried out in the strictest manner. By doing so there will be positive evidence that every man in the ship is fortified with an antiscorbutic agent of undoubted efficacy, whereas in the course usually adopted of sending the lemon juice to the several messes for consumption, there is no evidence whatever of any man taking it, and so valuable an agent should not be left to the whim or caprice of individuals, but rigidly enforced as an element of their safety." Was this recommendation strictly carried out?—The recommendation of the Medical Director-

General was strictly carried out, previous to the crews starting on the sledge expeditions the ration of lime juice was doubled, and all men returning from a sledge journey received a double allowance whilst resting on board.

56. In your letter of December 14th, 1876, I observe that you state that the second allowance of lime juice was not drunk at the tub but was sent to the messes, as you were satisfied that the men, being grateful for it, would make use of it. Can you suggest to the Committee any mode of testing the accuracy of your impression?—On the first issue of lime juice in the presence of an officer one man was discovered who could not drink lime juice, and the only mode of giving him the ration was for the medical officers to administer it at their discretion, and it was some months before they succeeded in educating his palate to receive it as an agreeable beverage, but afterwards he regarded his lime juice as a boon, the same as the rest of the ship's company.

57. (*Admiral Inglefield.*) Did the man who objected to the flavour of lime juice suffer from scurvy?—Yes. I believe his name was Francombe; he was employed in the northern division of the sledges; but notwithstanding his objection, the lime juice was administered to him the same as to any other man daily throughout the winter.

58. (*Dr. Fraser.*) I understand you to say that the recommendations of Sir Alexander Armstrong in reference to this question of lime juice were strictly followed out by you and your crews?—Yes, strictly carried out.

59. You tell us, however, that the quantity of lime juice was at a certain period doubled beyond what I understand was the recommendation of Sir Alexander Armstrong?—Yes.

60. Then I suppose that these recommendations gave you a considerable amount of discretionary power?—I considered the whole of Sir Alexander Armstrong's paper on the health of the Arctic Expedition as a suggestion and recommendation to me, but not in any way compulsory.

61. Can you give the Committee the date on which the issue of lime juice was first commenced after leaving this country?—On the 6th of June, 1875, the issue of lime juice was commenced. Up to the previous day, the ship's company were victualled on fresh beef and vegetables.

62. The allowance on commencing, I suppose, was in accordance with Sir Alexander Armstrong's recommendation, of one ounce per man daily?—The ration from the first was one ounce of lime juice and one ounce of sugar, the usual naval ration.

63. On what date did you double this ration of lime juice?—From March 1st, 1876.

64. Do I understand you to say that while the crew were taking one ounce of lime juice it was taken at the tub in the presence of the officers?—Yes, except in the case of a gale of wind or some such natural obstruction.

65. Then it was only when this ration was doubled that a portion of it was taken somewhere else; in the messes, I believe?—Only when the ration of lime juice was doubled was half the quantity issued in the evening to be consumed in the messes. I should state that to the ward-room officers lime juice was issued to them in their mess.

66. From the first?—From the first.

67. I did not quite understand your answer to the Chairman as to the reason why you departed from the previous procedure in allowing one portion to be consumed somewhere else. Have you anything further to say with reference to that?—The issue of lime juice was doubled by me, knowing that I should save lime juice to an equal extent, while the men were employed during the month of April, in the sledge journeys; it therefore left at my disposal a sufficient quantity to double the ration, and I knew that it would be agreeable to the ship's company generally; but this extra issue was never intended to be compulsory, the same as the regular issue of lemon juice.