WILEY

First Exploration of the Hoh Lumba and Sosbon Glaciers: Discussion

Author(s): Frank Younghusband and Captain Rawling

Source: *The Geographical Journal*, Vol. 27, No. 2 (Feb., 1906), pp. 141-144

Published by: geographicalj

Stable URL: <http://www.jstor.org/stable/1776666>

Accessed: 22-06-2016 10:43 UTC

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at

<http://about.jstor.org/terms>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Wiley, The Royal Geographical Society (with the Institute of British Geographers) are collaborating with JSTOR to digitize, preserve and extend access to The Geographical Journal

good deal for breath, and was obliged to change position often, but experienced no nausea. I could eat kola biscuits and chocolate and a little meat, but had no great desire for solid food.

The Swiss guides who accompanied us in previous expeditions, and the three Italians who were with us on the last one, climbed well and acknowledged no inconvenience from altitude, even at 20,000 and 22,000 feet, although they said they slept less well at above 18,000 feet than at lower heights.

The Balti coolies do not stand altitude as well as Europeans. Some become ill and incapacitated at 14,000 and 15,000 feet, and many are quite used up with migraine and nausea at 18,000 feet. All our coolies were either sick or demoralized at 19,358 feet, so that it was useless to attempt taking them higher. Many climb well for a short time at high altitudes, but they are quite unfit to endure the strain, that we Europeans undergo, of from ten to fifteen hours' movement in making an ascent. Their constant unsubstantial diet of meal or rice has, without doubt, considerable effect upon their physical endurance.

So far as acclimatization is concerned, I believe in it to this extent—that the longer one has camped and lived at altitudes of from 14,000 to 17,000 feet, the better fit one will be to attack heights of over 21,000 feet. My own experience leads me to think that a prolonged stay at 18,000 or 19,000 feet rather unfits than prepares one for ascending very high peaks. The want of oxygen, the cold and incapacity to digest a sufficient quantity of nourishing food, have a weakening effect on some constitutions.

The Anglo-Austrian party who attempted K_2 , certainly appear to have camped longer at great altitudes than any previous expedition, and they came, to judge from M. Jacot Guillarmod's account, to a similar conclusion. Personally I do not agree with M. Guillarmod, that one loses strength and weight on a diet of tinned food for several weeks. I can thrive on a diet of good tinned meats and vegetables and Bovril rations for three or four weeks as well, if not better, than on the monotonous diet of emaciated chickens, eggs, and mutton which one obtains in the lower camps of 12,000 to 15,000 feet.

Before the paper, the PRESIDENT said: I now have the honour of introducing to you Mrs. Bullock Workman. I presume that every one here reads the *Journal* of our Society, and if so, you will have known that Mrs. Bullock Workman, together with her husband, Dr. Hunter Workman, has carried on explorations for years past in the Himalayas, and you may perhaps remember that a portion of those explorations was described in a paper here by Dr. Hunter Workman about a year ago. It is, therefore, a merely formal introduction of the lecturer I have to present to you. It is unnecessary I should stand in the way of the reading of the paper by saying anything of the excellent exploring work of Mrs. Bullock Workman; but it has been so unusual, so infrequent, for a lady to read a paper here that a few words on this subject will, I think, be appropriate to the occasion. In my time I can only remember one single instance—that of the late Mrs. Bishop. Possibly

I may be wrong; there may have been one or two others, but I fancy not. Now, this infrequency has certainly not been due to any prejudice on the part of the Royal Geographical Society, which, as you know, or many of you may remember, so far back as 1869 showed a fine example by conferring its Gold Medal upon Mrs. Somerville for the great services that remarkable woman rendered to geography through her writings. The cause, therefore, must be sought elsewhere. Any paper read at these ordinary meetings must fulfil one of two conditions: it must either be a record of exploration, laying before us new facts or new aspects of facts; or, on the other hand, it must be a useful contribution to scientific geographical research dealing with the meaning, the relations, the causes, or the effects of geographical phenomena. Sometimes these two conditions have been united in a remarkable degree, yielding material of exceptional value; but it has been extremely rare that either of these conditions has been fulfilled by a woman. Now, at first sight it might appear to an impartial observer—say, to the often-quoted visitor from the planet Mars—that research in any department of science would be a most appropriate and tempting field for the more sedentary half of our race. Brilliant instances have proved the capacity, certainly of some women, for dealing with many departments of science, and I suppose that nobody will deny to them a fair share of that instinct of curiosity which, properly directed, becomes a thirst for knowledge. But from time immemorial that capacity has been discouraged, that instinct has been directed or perverted into less useful channels by the most powerful force in the world—conventional prejudice, which has laid it down as a sort of axiom that women are not adapted for scientific pursuits. Well, it is not for me, speaking from this chair, to judge this opinion from the standpoint of ethics or the standpoint of æsthetics. I am looking at it impartially, objectively from the geographical standpoint, as an interesting phenomenon, and I say it is interesting to remember that the nineteenth century, which threw open widely to women the door leading to the arts, kept, if not closed, yet somewhat jealously ajar, the door leading to the sciences. And, curiously enough, it defended that conventional discouragement on the ground of those very deficiencies in the average woman of exactness and thoroughness which had been the inevitable result of similar discouragement during past ages. And it is also, perhaps, more interesting to note that this conventional prejudice has tended, not only to cut off from half or more than half of the educated classes of humanity an entire quadrant of the consolation of life, an entire quadrant of the joys of life, but it has also tended to ensure that even boys shall be, during their most plastic years, brought up in a hazy atmosphere which obscures the clear outlines of knowledge, and which imbues their minds with the often ineradicable delusion that the sciences are dull, or that their altitudes are less accessible than the corresponding altitudes of the arts. However, of quite recent years there have been signs of a change. Perhaps the twentieth century may take a broader view, so that the Royal Geographical Society at some future day may have a wider area than that now open to it from which to draw papers on scientific geographical research. Exploration, of course, stands on an entirely different basis, because here conventional prejudice has not been the only, perhaps not the principal, deterrent; there are quite a number of conditions of a rather unusual kind which must be combined in order to produce a lady explorer. Of these conditions I need only mention three—sufficiency of independent means for organizing expeditions, sufficiency of power of physical endurance of hardships, and a somewhat strong love of adventure. But when these and the other conditions which I have not mentioned are combined, and when, secondly, a lady is in a position to place before us, as Mrs. Bullock Workman is, an interesting and a valuable record of exploration, it ought to be, and I believe it

is, a matter of much congratulation to this Society and to all lovers of the acquisition and diffusion of geographical knowledge. I will now invite Mrs. Bullock Workman to read her paper on "Exploration of the Hoh Lumba and Sosbon Glaciers."

After the paper, Sir FRANK YOUNGHUSBAND said: As a humble member of that fraternity which the lecturer has called "Anglo-Indian valley-pounders," I should like to congratulate her most sincerely upon her brilliant achievements in the Himalayas. I myself take the deepest possible personal interest in the lecture, because eighteen years ago I travelled immediately to the eastward of where Mrs. Bullock Workman was travelling in the journey which she has described to-night, crossing the Mustagh pass and those other great peaks; also I have had the good fortune to travel on the westward side, at the mouth of the great Hispar glacier, of which a magnificent photograph was shown to-night. I am therefore in a position to peculiarly appreciate the immense difficulties which Mrs. Bullock Workman overcame. I do not know if she ever had the experience, which I must confess I often had, of feeling all the energy and go within one gradually oozing out till there seemed nothing left to spur one on to overcome the difficulties in front. In some climates I did particularly feel that, especially in the Himalayas, and any such feeling as that seems to have been overcome by Mrs. Bullock Workman with the utmost determination. I should like to say just one word in appreciation of the Balti coolies, with whom Mrs. Bullock Workman does not seem to have had very good experience. The Balti coolies, I know, are often very trying, but it is to be remembered that they are not really mountaineers. They live in the bottom of the valleys, they do very little in the way of climbing, and, I am sure, of their own accord they never venture on these horrible glaciers. As Mrs. Bullock Workman has said, their food is not such as to produce in them any very great stamina but my experience was that there are amongst them many excellent men, and I should not like this evening to pass by without saying one word in their favour. It was with Balti coolies that I crossed the Mustagh pass, immediately eastward of the country which Mrs. Bullock Workman explored. They accompanied me the whole way into the valley of Kashmir, and but for them I should never have got across the Mustagh pass into Kashmir. I was then even more unaccustomed to mountain travel. I had no idea what the difficulties were; I placed myself entirely in their hands, and they accepted the trust and carried me over. I therefore should like to say these few words in appreciation of these coolies, and I hope, when next Mrs. Bullock Workman does us the privilege of travelling on the Indian frontier, she may have more pleasant experience with them than she evidently had last year. I wish to thank Mrs. Bullock Workman most sincerely for the interesting and valuable lecture she has given us this evening, and for those highly interesting series of photographs, which give a most excellent idea of those fascinating mountains.

Captain RAWLING: This is quite an unexpected call upon me to make a speech. The only thing I can think of is what Sir Frank Younghusband has been saying about the Balti coolie. The little experience I have had tends to show they have always done excellent work. They carried on communications through the pass, and it was really through them, chiefly in the transport line, that the advance forces were supplied with food, which enabled the Tibetan Mission to move finally on to Tibet.

The PRESIDENT: I regret to say that Sir Thomas Holdich, whom every one knows in connection with the Survey of India, had looked forward very much to coming here and speaking on this paper; in fact, up to yesterday he hoped to be able to come, but he has a severe chill, and won't be able to address you. Sir

Martin Conway is on the continent, and Colonel Gore, another great authority, has gone to India. I do not know whether there is any one else in this audience who is competent to discuss the question. I certainly am not. If there is any one, we shall be very glad to hear him.

It only remains for us to give a vote of thanks, which I am sure this time will be exceptionally genuine, to Mrs. Bullock Workman for her most admirable paper.

BATHYMETRICAL SURVEY OF THE FRESH-WATER LOCHS OF SCOTLAND.*

Under the Direction of Sir JOHN MURRAY, K.C.B., F.R.S., D.Sc., etc., and
LAURENCE PULLAR, F.R.S.E.

PART X.—THE LOCHS OF THE NAVER, BORGIE, KINLOCH, AND HOPE BASINS.

IN this paper it is proposed to deal with the lochs of north-west Sutherlandshire, draining by the rivers Naver, Borgie, Kinloch, and Hope into the North Atlantic, along the north coast of Scotland, which have been sounded by the staff of the Lake Survey, viz. Lochs na Meide, Naver, a' Bhealaich, Coir' an Fheàrna, Syre, Cùil na Sìthe, Laoghal, Creagach, Chaluim, an Dithreibh, and Hope. The district under consideration is shown in the index-map (Fig. 1), and extends from Loch Eriboll and Torrisdale bay on the north, to Ben Armine and Meall a' Fhuarain on the south, and Ben Hee, Meallan Liath, and Meall Horn on the west, including also the mighty peaks of Ben Hope and Ben Klibreck, which exceed 3000 feet in height. The scenery of the district may be described as wild, grand, and mountainous. The total area of the four basins, as measured by the planimeter on the 1-inch Ordnance Survey maps, is about 382 square miles, as follows:—

Naver basin	...	...	...	...	199 square miles.
Borgie „	...	...	...	...	62 „
Kinloch „	...	...	...	...	46 „
Hope „	...	...	...	...	75 „
				382	„

Of this area, about 240 square miles (or nearly two-thirds) drain into the lochs under discussion, as will be seen by the summary table at the end of this paper. These lochs include the largest in the extreme north of Scotland, five of them exceeding three miles in length, while two of them exceed six miles in length. Three of the lochs have each a superficial area exceeding 2 square miles, the largest in this respect being Loch Laoghal, which, though only $4\frac{1}{2}$ miles in length as compared with the 6 miles of Lochs Naver and Hope, exceeds the two last-named

* Plates, p. 224.