

Eskimo of North Greenland to the wild tribes of Tierra del Fuego. Each lay figure group comprises from four to seven individuals, selected to convey best an idea of the various members of a typical family. The activities of the people are illustrated, and the various products of industry are, so far as possible, brought together in consistent relations with the group. No one who has seen these splendid groups can doubt that this is the best way of illustrating the more salient features of ethnology, especially when these are supplemented, as in Prof. Holmes's scheme, with models made to scale of habitations and of boats, with a limited selection of objects made by the various people, and illustrations of their more important physical characters, such as crania, casts from life, and pictures. An exhibit such as this for all the more important groups of mankind would be of extreme interest and educational value, and would meet all the requirements of the public. If this arrangement were carried out the great bulk of ethnological material, which takes up so much space in large museums, need not be exhibited to the casual visitor.

There are two methods of constructing the lay

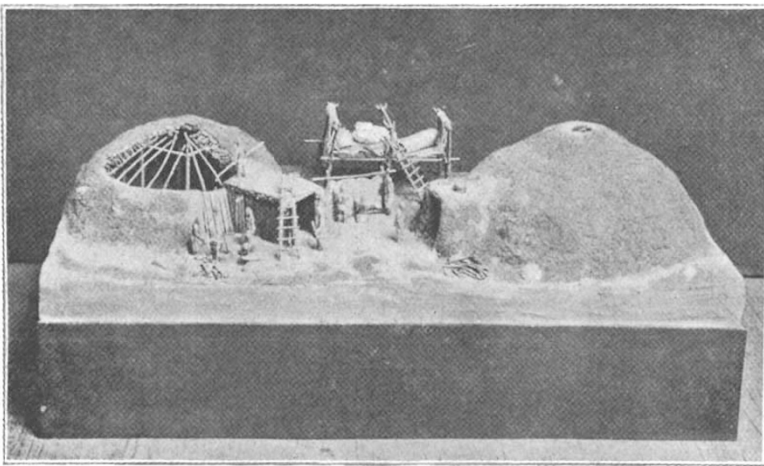


FIG. 2.—A dwelling group of the Pawnee Indians, a type of the Missouri Valley region. The Pawnee formerly lived in Nebraska. Although their home is in the country of the skin-tent dwellers, they continue to build the ancient northern type of earth-covered abode with slightly sunken floor.

figures of ethnological groups. The one is to make casts of actual individuals, and the other is to have effigies made by a sculptor. The Chicago groups are examples of the former method, but the Washington groups were made in the following manner:—"The sculptors were required to reproduce the physical type in each instance as accurately as the available drawing and photographs would permit. Especial effort was made to give a correct impression of the group as a whole, rather than to present portraits of individuals, which can be better presented in other ways. Life masks, as ordinarily taken, convey no clear notion of the people; the mask serves chiefly to misrepresent the native countenance and disposition; besides, the individual face is not necessarily a good type of a group. Good types may, however, be worked out by the skilful artist and sculptor, who alone can adequately present these little-understood people as they really are and with reasonable unity in pose and expression."

These groups and the other ethnological exhibits prepared under the direction of Prof. Holmes are figured and described in the annual report of the U.S. National Museum for 1901, published by the Smithsonian Institution in 1903. In the same volume will

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be found Prof. Holmes's views on the classification and arrangement of the exhibits of an anthropological museum. This essay, which will prove of considerable value to those concerned in this class of work, was previously published in the *Journal of the Anthropological Institute* (vol. xxxii. p. 353).

In his address Dr. Bather dealt mainly with art museums, but he alluded to folk museums, and Mr. Henry Balfour, in his recent presidential address to the Anthropological Institute, advocates the establishment of a national museum to illustrate the evolution of culture in our islands; he, like Dr. Bather, instances what is done in this respect in Scandinavia and Germany. Certainly this is much needed in our country, and immediate steps should be taken to realise it; already much has irrevocably been lost, as there was no institution that cared to preserve the relics of former conditions. In the same address Mr. Balfour gives some valuable suggestions for the arrangement of ethnological museums. Mr. Balfour's address will be printed in the forthcoming number of the *Journal of the Anthropological Institute*, and it will be found to be well worth perusal, as it embodies the long experience of a well-known expert in museum arrangement. It is to be hoped that the time may not be far distant when the educational value of properly arranged ethnological museums will be recognised in this country, and the means will be found to establish them.

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ROUND KANCHENJUNGA.¹

THIS work of Mr. Freshfield's on a tour round Kanchenjunga comes as a very welcome addition to the literature that deals with the great mountain peaks of the world. Kanchenjunga (28,150 feet) is the third highest measured peak on the earth's surface, Mount Everest being 29,002 feet, and K², in the Karakoram range north of Kashmir, 28,278 feet high. At present Mount Everest is hopelessly impossible of access, being in Nepal, a country entirely closed to Europeans; K² also lies so far removed from civilisation that it takes weeks of travelling, many days of it over glaciers, to arrive even at its base.

Kanchenjunga, however, can be seen from Darjeeling, and the view of the peak from that place is one of the grandest sights in the world. Kanchenjunga and its attendant peaks form a solitary group of mountains, which divides the province of Sikkim from eastern Nepal, and lies far south of the watershed of the Himalaya.

It is now many years since Sir Joseph Hooker in 1848-1850 made his famous journeys into the country round Kanchenjunga, and obtained leave from the Government of Nepal to travel in the Nepalese valleys on the west and south-west of Kanchenjunga. This leave has never been repeated, and it was not until Mr. Freshfield and his party descended the glaciers on the north of Kanchenjunga and trespassed in the Kanchen valley that Englishmen again set foot in this forbidden land.

¹ "Round Kanchenjunga; a Narrative of Mountain Travel and Exploration." By Douglas W. Freshfield. With Illustrations and Maps. (London: Edward Arnold, 1903.)

Briefly summarised, Mr. Freshfield's tour was as follows:—Starting from Darjeeling he made his way up the valley of the Teesta River, which, running southward, bounds the whole of the Kanchenjunga range on its eastern side; leaving this valley the Zemu River was followed until the Zemu glacier was reached. Here it was that the party were overtaken by the great storm of September, 1899, which "after devastating Darjeeling, swept across Kanchenjunga into Tibet in the form of a premature snowfall, lowering the snow-level nearly 4000 feet and practically closing the highest region." As there was no wind the snow did not drift, but after the storm was over it lay between three and four feet deep round the tents.

Such conditions would have turned back most travellers and stopped any attempts to cross passes more than 20,000 feet high. Mr. Freshfield, however,

As the party were now in forbidden country, some anxiety was felt as to their reception by the inhabitants, but with the exception of one official no trouble was met with, and as an excuse for the trespass it was pointed out that, driven by the great snowstorm over the pass, the party were seeking their way back to British territory, and that obviously their nearest way was down the Kanchen valley, thence by the Chunjerma and Kang La back to Darjeeling.

From many points of view this work of Mr. Freshfield's is of interest; it is a delightful record of mountain exploration, it is splendidly illustrated, and the descriptions of ice-clad mountains, of tropical forests, and of the great beauty of the atmospheric effects in this great mountain range are all given most admirably by the author. Moreover, many most interesting scientific and geographical problems are discussed.



FIG. 1.—Camp below the Jongsong La. From "Round Kanchenjunga," by Mr. Douglas W. Freshfield.

was not discouraged, and although even a partial ascent of Kanchenjunga was out of the question, still he managed to lead the party over the northern ridge of the Kanchenjunga range and to explore some totally new ground in eastern Nepal. Before doing this he moved north-eastwards to Lhonak. It was from here that the party, together with the baggage train of coolies, crossed over the Jongsong La (20,207 feet). On the west side of this pass lay Nepal, an unknown land. For several days the route lay downwards over glaciers, and it was only after nearly a week spent on the ice and snow that the party finally arrived at the upper grazing grounds of the cattle belonging to the Nepalese village of Kangbachen. Here it was that they connected their route with that of Sir Joseph Hooker, who fifty years previously had visited this valley.

One important question was as to whether there are peaks higher than Mount Everest lying further to the north in Tibet. Twenty years ago Mr. Graham, from the summit ridge of Kabru, at a height of more than 20,000 feet, asserted that he saw two peaks, one covered with snow and one of rock, further north than Mount Everest, and that they appeared as high, possibly higher, than Mount Everest. This statement has been partly confirmed by native explorers. That high peaks exist there is undoubted, and one was seen from the Chunjerma Pass by Mr. Freshfield. Also more recently a photograph taken by Mr. H. H. Hayden, and published in the *Geographical Journal* (1904, 362), shows these peaks. Mr. Freshfield, commenting on this photograph, says:—"Somewhat to the north-west of Chomokankar (Mt. Everest) appears a great group of peaks; one rock and one snowy

summit are conspicuous. These are apparently as yet unidentified and unmeasured. They rise at no great distance beyond Chomokankar, and are probably south of the Tingri Maidan."

During late years much has been written about the effect of rarefied air at high altitudes on the human system. Mr. Freshfield and his party suffered but little inconvenience, even when on the summit of the Jonsong La (20,207 feet). That the effects of low barometric pressure have been much exaggerated is also borne out by the experience of Mr. White, political officer in Sikkim, who says:—"I find that the height is felt most at from 14,000 to 16,000 feet, and that if they (the coolies) once get over that, going to a still higher altitude has very little further effect. Personally the height does not affect me, and I felt perfectly well at 21,200 feet."

The geology of the district is most ably described by Prof. Garwood, by whom also an excellent map of the whole Kanchenjunga range has been made.

Mrs. Le Mesurier has contributed a chapter on Tibetan curios, and in the appendix, besides the exhaustive description by Prof. Garwood of the geological structure and physical features of Sikkim, there is a mass of important and interesting matter collected by the author; on the narratives of journeys made by native surveyors; on the various native names for the highest measured peak (Mount Everest); also a most useful list of books and maps consulted, and last, but not least, a list of photographs taken by Signor V. Sella during the tour of Kanchenjunga.

"Round Kanchenjunga" is a book worth reading from many points of view; it is not merely a tale of mountaineering adventure, but is full of information, artistic description, and new facts. It is a book which undoubtedly will be "serviceable to Alpine climbers and men of science, and not without interest for those who 'love the glories of the world' and count among them great mountains."

HIGHER EDUCATION IN THE UNITED STATES.¹

ALL intelligent attempts to make known in this country the extent and success of American educational enterprise deserve encouragement. So well considered an effort as that of Mr. Mosely not only merited but has received enthusiastic appreciation. By securing the assistance of educationists representative of successive steps in a complete educational system, Mr. Mosely has been able to bring together in convenient compass authoritative expressions of opinion as to the precise state of each grade of education in the United States, and to provide our new educational authorities with information as to the characteristics of American education which good judges think might with advantage be copied in this country. Similarly, the features of the work of schools and colleges in the States which should be discouraged among us are in this report duly indicated. Mr. Mosely has, too, made arrangements to ensure a wide circulation for the valuable material collected under his auspices. By forwarding to the publishers of the volume the cost of postage and stating his qualifications, any member of an educational authority, any county councillor, local manager, headmaster, or registered teacher may obtain a copy of the book free.

The twenty-six separate reports contained in the volume cover the whole field of education from the kindergarten to post-graduate university study, but it

¹ "Reports of the Mosely Educational Commission to the United States of America, October-December, 1903." Pp. xxiv+400. (London: Co-operative Printing Society, Ltd., 1904.) Price 1s., post free 1s. 4d.

will be possible in this place to refer to a few only of the more important directions in which American practice offers British educationists food for serious reflection. The most prominent place may well be given to an impression received by all the commissioners alike, and recorded first in their joint report; we refer to "the absolute belief in the value of education both to the community at large and to agriculture, commerce, manufactures, and the service of the State" which distinguishes the inhabitants of all the United States. Side by side with this record of their observations must be placed the commissioners' message to their countrymen, which is expressed as a desire "to impress on the British public the absolute need of immediate preparation on our part to meet such competition" as this enthusiasm for education in America will lead us to experience. Evidence of the advances in American education, and also of the sacrifices made in the States to endow and develop colleges and universities, have been frequently laid before readers of NATURE. But though here and there in Great Britain a desire has been manifested to found new universities, and though we are glad to admit that a few of our men of wealth have emulated the example common among American millionaires of giving largely to educational institutions, a general awakening on the part of the nation so far as a thorough belief in education is concerned is still a matter of the future. Meanwhile, the schools and colleges of the United States go steadily on with their work of preparing the rising generation. As Mr. W. P. Groser, who was nominated to the commission by the Parliamentary Industry Committee, says in his report, "England is now competing with American commerce in the making. In the next generation our manufacturers will meet trained men, adding culture to their enterprise and knowledge to their ambition."

Another striking difference between the English and American attitude towards education is appreciated by comparing the relations in the two countries between industry and higher scientific and technical instruction. The report makes it abundantly clear that in America there is complete sympathy between the manufacturers and the college professors, and that properly trained college men are in great demand. Says Prof. Ayrton, "I saw that there actually existed that close bond of union between the industry and the teaching which only the more sanguine of us have hoped they might, perhaps, live to see introduced into our own country." Mr. Blair asserts, "the relationship between the schools and the industries has become one of supply and demand." Prof. Ripper states, "We were frequently told that 'the American manufacturer twenty years ago, like the English of to-day, thought little of the technically trained men. The difference between us now is that the American has changed his opinion, while England appears to be where she was'" Commissioner after commissioner gives instances of the large proportion of men educated at college who are engaged in great manufacturing concerns in the States. Out of 10,000 employees in the Westinghouse shops and offices, there are 160 college-trained men employed. At the Carnegie Steel Works, where there are 7000 hands, about a hundred technically trained men are engaged, seven of the twenty-three leading officers being college graduates, and similar cases might be multiplied indefinitely.

The same enlightened policy is adopted in the matter of apprentices. Prof. Ayrton was told everywhere, "an engineering apprentice in a factory should be a college trained man," and the foreman of the apprentices at the Westinghouse works informed him, "the engineering apprentices, of whom we have about 150,