

letters used are not clear for their size. Besides the information usually given in maps, these show the approximate average times required for the various routes, indicated by red lines, arrows for direction, and figures; also the position of huts, those which are 'bewirthschaftet' in summer being distinguished by a line under the name. We expressed our opinion some time ago* as to the red-line system; the other speciality of these maps is purely useful. The Austrian map-makers have, however, a long way to go before they can rival either the North Germans or the Swiss.

Herr Leuzinger has published a *Relief-karte* of Switzerland (Bern, Kümmerly), to which the remarks which we made in August last on his map of Tyrol equally apply. The scale is a trifle smaller (530'000), the names, perhaps, rather better selected. He sends also a specimen of the map before the insertion of the names, which shows the configuration of the country a good deal better.

Mr. L. Cumming, of Rugby, has reprinted in a pamphlet called *Notes on Glacial Moraines* (Liverpool, Tinling) a paper, originally published in the 'Proceedings of the Liverpool Geological Society.' His main points are that the moraine is composed entirely of fragments fallen from the rocks surrounding the glacier, *not* broken off by the glacier; that the stones in a fresh moraine are very rarely polished or rounded, and, therefore, that when such stones are found in ancient deposits we must assume the operation of water; and that the sand which forms the cement whereby the stones of a moraine are bound together is rather that which winds have blown on to the surface of the snow or glacier from dry places than the product of any grinding process due to the glacier itself, which, in his view, is only to be looked for at the bottom of the glacier. He suggests 'with hesitation' that the convexity of the transverse section of glaciers is due to the more rapid melting of the sides, caused by the radiation from the rocks which bound it, and accounts in the same way for the fact that moraines on a glacier often appear to lie in a kind of trough. On the vexed question of the glacial origin of lakes he says: 'Having in the last twenty years visited very many valleys whose upper ends are occupied by glaciers, both in Norway and in Central Europe, the writer has never seen one such lake in process of forming—as, for instance, a glacier ending in such a rock-bottomed lake, which increased in length as the glacier retired.'

WINTER EXHIBITION.

THE annual exhibition of pictures and photographs, brought together on the occasion of the winter assemblage of the Alpine Club, attracted this year even more attention than usual. For several years the photographic section of the exhibition has been markedly increasing both in size and importance. This is doubtless chiefly due to the fact that the camera is becoming a more and more ordinary part of the normal

* *Alpine Journal*, vol. xiii. p. 286.

climber's equipment, but it must likewise be remembered that concurrently with this development of one of the most valuable accessories to travel, the development of mountaineers into travellers has likewise been going forward. Members of the Alpine Club are now to be found in almost every great mountain region in the world. They have recently not only flocked to the Caucasus, but they have penetrated into its remoter districts. Daghestan has now been photographed. The Selkirks, in North America, have been further explored. Renewed attention has been paid to the great mountains of Mexico. Moreover, this extension of the mountaineering range is not the result of a spasmodic and exceptional effort; it is a normal and continuous growth, and may be regarded as merely the promise of greater developments to come.

For these reasons the photographic exhibit presents many features of novelty and interest which cannot appertain to the collection of pictures. The paintings, of course, do not, or should not, depend upon subject for charm. It is the art and beautiful manner of the work that is the real subject of a picture, but to this view very few Alpine artists have been bold enough to rise, in defiance of the usually false standards of their mountain-climbing *clientèle*.

The large number of objects exhibited, the brief time during which the exhibition is open, and the impossibility of preparing a catalogue for so ephemeral a show, render it almost impossible for a critic to exercise any of his proper functions on this occasion. It will doubtless be the case that many a good piece of work escaped our notice through the mischance of an unfavourable position.

A pathetic interest attached to the work of our recently deceased member, the veteran Alpine painter, George Barnard. Some two dozen or more of his pictures were exhibited, and attracted much attention. The artist's style is well known to all members of the Alpine Club, and need not form the subject of special characterisation in this place.

On all accounts the most remarkable painting in the exhibition was a simple but most excellent water-colour study of the Wetterhorn from Grindelwald by the great artist Bonnington. Such truthful representation of form, such dignified suggestion of mass, such absence of the ordinary hysterics, into which Bonnington's contemporaries were usually thrown in the presence of high mountains, came as a surprise to many experienced amateurs of Alpine art. Mr. Ruskin's outline of a distant view of Mont Blanc was interesting more on account of the personality of the artist than the beauty of the work. Mr. Arthur Severn's contributions, notably a mountain view in the Coniston district, were worthy of more leisurely study than any we were enabled to give them. We likewise noticed a remarkable 'Grivola,' and a fine glacier pool by Mr. Alfred Williams, and a few characteristic examples of the work of M. Loppé, Mr. Arthur Croft, and Mr. Smith. Mr. Willink exhibited several of his very popular studies of mountaineers in action and repose, besides numerous designs for book illustrations. His most characteristic examples always contain an undercurrent of humour, even when the subjects are not directly humorous. On the

present occasion a sketch of five guideless dufers on a glacier was his most popular contribution. The largest, and in some respects the most important, work exhibited was a great water-colour painting of the Jungfrau and neighbouring peaks as seen from Mürren, by Mr. A. McCallum. This contained much careful and even subtle work, and attempted, not without success, to render the mysteries of atmospheric effect, of the existence of which so few climbers are even conscious. Unfortunately, the light in the room was most unfavourable to the picture, and it was almost impossible to form any true estimate of the artist's success. It seems to us that so large and so carefully wrought a picture would have 'carried' further and been altogether stronger, without loss of delicacy, had it been executed in a more solid medium.

Turning now to the photographs, one of the most artistic in choice of subject, and the most technically perfect in other respects, was Captain Abney's 'Study of Hoar-frost.' The other photographs exhibited by the same accomplished photographer were likewise wonderfully perfect. Mr. Eccles' beautiful views of the Matterhorn, more or less enveloped in a becoming drapery of cloud, attracted universal admiration; and M. Loppé's winter and cloud effects, similar to those which were so well appreciated last year, were, in almost every instance, beautifully chosen as to point of view and moment of exposure. The series of large photographs of mountain scenery in Daghestan, contributed by Mr. G. P. Baker, have been already referred to. Specially notable were the views of Shalbruz and of the village of Mesa. Some enlargements from Kodak negatives obtained by Mr. Walter Leaf on the Dent Perroc, the Aiguille de la Za, and other neighbouring points, representing precipitous rocks and interesting details of scrambling, were of interest both for themselves and as showing the rapidly-developing capabilities of light photographic apparatus. Mr. Dent contributed some interesting views of the S. portions of the main Pennine chain, and a noteworthy enlargement of what is perhaps the most remarkable view of the Matterhorn, that, namely, from the little visited Punta des Cors. Prof. Dixon's views of the Needle Rock showed that it is not necessary to go to the Alps for startling crags and natural obelisks. A further series of images of Caucasian scenery was contributed by Mr. H. Woolley; while last, and, probably, most important of all, we were favoured with a quantity of new photographs of the same wonderful mountain range, taken last summer by Signor Sella. Amongst them were several notable portions of fine panoramas, views of important and till now unphotographed glaciers, and many most interesting examples of Caucasian village architecture.

In conclusion, we cannot but regret that this remarkable collection of photographs was visible for so short a time. Surely amateur photographers could be made to see the importance of sending one example of each important view they take to the Club Library. The fault is, probably, with the Club itself, which does not provide proper accommodation even for the photographs which it does possess. Let us hope that progress will soon be made in this direction also.

W. M. C.