addition to those acknowledged in the 'Alpine Journal' of November 1874:—

Frank Marshall, 20*l.*; Leslie Stephen, 3*l.*; F. A. Wallroth, 5*l.*; G. E. Foster, 5*l.*; E. Hulton, 5*l* ; Mrs. J. Mathias, 1*l.*; Miss M. C. Hulton, 1*l.*; H. Wagner, 2*l.*; J. E. Gorst, 2*l.* 2*s.*; Horace Walker, 5*l.*; J. P. Barlow, 5*l.*; J. W. Hartley and brother, 5*l.*; Christopher Thomas, 1*l.* 1*s.*

In addition to these sums it is a pleasure to add that I felt it right to return to the kind donors these additional subscriptions, as Mrs. Fischer is now amply provided for.

Arthur Cust, 1*l.* 1*s.*; Cawood, 1*l.* 1*s.*; Calgrove, 1*l.* 1*s.*; Miss T. Blackburne, 5*l.* 10*s.*; Seymour Hoare, 15*l.*

Yours very truly, T. S. KENNEDY.

CRISSOLO; VALLE DEL PO.—The sanctuary of San Chiaffredo, situated ¼ hr. from the village of Crissolo, near the sources of the Po, and at the foot of Monte Viso at a height of 4,670 feet, has been converted into a hotel, and will be opened this season under the management of M. Avaldo, an original member of the Italian Alpine Club. There is no reason why the Italian valleys of the Alps should not become as much frequented as the Swiss. The creation of good inns will probably induce many of our countrymen and countrywomen to make themselves familiar with scenery which has hitherto been too much neglected.

If the Lake of Lucern is preferable in July, there are many weeks in early summer and autumn when the climate and beauty of vegetation of the Italian side ought to give it the preference. No one will regret if the efforts now being made in North Italy to attract foreign visitors succeed in reducing the crowd on the N. side of the Alps, and in transferring some of the money which flows so freely into Swiss pockets into those of their equally deserving neighbours.

A CORRECTION.—Mons. M. Dechy wishes it to be stated, that in speaking of his ascent of Monte Rosa as a new expedition he did not mean to imply that the top had not previously been reached from the Monte Rosa Glacier. What he wished to point out was, that his ascent was the first which proved that the mountain could be easily reached from the Val di Lys.

THE ALPINE CLUB MAP OF SWITZERLAND.*

IN the words of the wise king we read, 'He that ruleth his spirit is better than he that taketh a city.' In the same sense we must admit 'he that maketh the map is better than he that climbeth the peak.'

---

* *The Alpine Club Map of Switzerland*, with parts of the neighbouring countries. Edited by R. C. Nichols, F.S.A., F.R.G.S., under the superintendence of a Committee of the Alpine Club. Longmans & Co. and E. Stanford. Edinburgh: W. & A. K. Johnston.

Digitized by Google

Only those who have tried the task can have any idea of the infinite pains, patience, and skill required in the construction of a map which rises above the level of an ordinary route sketch. As in the well-known adage of the cookery book, you are told first to catch your hare, then to dress it, so the map-maker is beset with two classes of difficulties of a very different character. First he has to construct his manuscript map; and here, even when comparatively good materials are to hand, his task is no light one. Differences and discrepancies have to be reconciled, lacunæ filled up, redundancies, where there is a reduction of scale, put away, endless questions of nomenclature and orthography settled, and a keen watch kept against personal errors; then, when at last a satisfactory result is attained, a new set of difficulties beset the author. The map is now placed in the engraver's hands, and has to be copied, and, as it were, translated by those who probably have no knowledge of either the country or its language. The mere task of supervising this stage of the process must be one of great toil and requiring the utmost care and patience. If the region be mountainous, all the above-named difficulties are increased many fold, by the far greater complexity of the terrain, and the mechanical obstacles to representing on a comparatively small scale its surface inequalities in black and white.

Few tasks could have presented more difficulties than the compilation and preparation of a map such as this which we have now before us. It is quite true that for some districts very valuable and ample materials existed, but this very advantage was to some extent only an increase of the difficulty, because for other districts the materials were so imperfect and faulty, that the high standard rendered necessary in the former case was most hard to attain in the latter. To finish one part of a sheet from the Swiss Federal Survey, and another from that of the Sardinian Engineers, to which we shall presently refer, would have been impossible. The completion of this map has therefore been no mere compilation, but has involved a large amount of 'original research.'

Map-making at the present day may be almost classed among the fine arts. The works of the Swiss, French, and English Ordnance Surveys have educated us to require a high standard of perfection not only in transcribing the topography of a district, but also in representing it on paper. We expect a map to serve some of the purposes of a model, and to give us by a dexterous use of light and shade a general idea of the physical features of the country.

The earliest notions of map-making were decidedly pictorial. In the celebrated *Mappa Mundi* of Hereford Cathedral, which dates about the year 1300 of our era, there is no attempt to give topographical features with accuracy. The known world is projected into a circle upon no system whatever, and the shapes of Italy, Greece, the Mediterranean, &c., bear practically no resemblance to their real forms. Jerusalem of course appears as the γῆς ὀμφαλός; strange fish swim in the seas, strange beasts wander over the earth, and in its outer confines are placed 'anthropophagi and men whose heads do grow beneath their shoulders.' A later example of the same style is found in the maps to that

Digitized by Google

charming old book the 'Pisgah Sight of Palestine.'* Here topographical features are barely rendered, save in the general outlines of the country, but the land is dotted with groups of villages and towns, on a scale vastly greater than even 'Jericho's high-reaching towers,' outside which groups of people of stature far exceeding even the sons of Anak, and quite incapable of entering their own dwellings, dance and fight. Deborah sits at the foot of a palm-tree like a monstrous feather-brush, above a Luz which is about the size of a foot-stool. Ebal and Gerizim, shaped like the heads of two seals, seem to bow to one another under the weight of two clusters of excited Brobdignagians. The road from Shiloh, a mile broad according to the scale (which is honestly given in one corner), runs indifferently along steep spurs of hills, and the Royal Palace of Samaria is almost as high as the city is wide. According to the same scale there were indeed giants on the earth in those days, for the average stature of the natives of Palestine appears to have been from one and a half to two and a half miles in height.

To come nearer to our subject, something of the same style may be observed in Scheuchzer's 'Itinera Alpina,' but he is not always quite consistent. In a map of 'La Suisse, suivant les Nouvelles Observations de Messrs. de l'Académie Royale,' we find some attempt at giving a general topographical character, while in another of 'Ursæ fluvii primi fontes' we find the pictorial style more completely preserved. Two features are conspicuous in both; one, that the mountain chains are generally represented as lines or groups of isolated hills, more or less conventional in form; the other, that everything has a disposition to wriggle. The river, banks of lakes, even the very mountains themselves, appear in a state of unrestful 'squirm.' Traces of the pictorial style are strongly marked even in parts of General Bourcet's map of Dauphiné, published in the year 1754, which however, except in some of the less accessible mountain districts, is a work of considerable accuracy and merit.

A process analogous to that in the development of animals appears to have taken place in map-making, and the monad monticules of the older geographers became conjoined into segmented representatives of the annulosa. In this stage markings which look more than anything else like hairy caterpillars wriggling over the page are supposed to indicate mountains. From this phase the Keller's and Leuthold's of our earlier days of travel, when as yet the Alpine Club was not, had hardly emerged, though of course the better class of maps had already attained a much higher stage of development.

To review such a map as that which we have before us is no light task. It supposes that the critic has an intimate knowledge of the whole of Switzerland and of considerable districts in the neighbouring countries; that with one fell purpose in view he has spent years in exploration of the Alpine recesses, storing his note-book and memory with their most minute details, and darkly plotting against the peace of mind of the committee who had charge of the preparation and publica-

* By Thomas Fuller, B.D. Published 1650.

Digitized by Google

tion of this map. We pretend to no such knowledge, we are guilty of no such evil designs; we profess only a general acquaintance with most parts of the Alps and with the maps which do or do not represent them, and frankly own at the outset that (humiliating as the confession may be) we consider the editors more likely to be right than ourselves. But before entering on the details of this map, it may be well to describe the general character of some of the more important maps which have been published in the present century, in order to show the kind of materials, both bad and good, which the editors found ready to hand. As an example of the former class we may take the 'Carte Topographique Militaire des Alpes (Piedmont, Savoy, &c.), par J. B. S. Raymond.' This important map (on a scale of 1 : 200,000), published at Paris in the year 1820, exhibits some extraordinary blunders in the mountain region. One instance may suffice: it is from the neighbourhood of Zermatt. The name 'Matterhorn' is placed about in the position of the Weisshorn, and an arm of the Turtmanthal is carried behind it, so that a direct pass should exist from that valley to the Zmutt Glacier. The name 'Weisshorn' is placed at the head of the Einfischthal, so that its glaciers would descend on one side into that valley, on another to the Eringerthal, and on a third to the Turtmanthal. The geography of the head of the Gornervispthal is hopelessly wrong; the Breithorn is rather too much to the north, the name 'Mont Cervin' is placed on the ridge between the Eringerthal and the Zmutt Glacier almost in the position of the Col d' Hérens, and a pass is marked as running from Evolena across the very head of the Valpelline to Breil. This extraordinary jumble may serve to show the general state of knowledge of Alpine geography some fifty years ago, unless it is intended to exhibit a military contempt for all regions where cannon could not pass or at least troops be led.

A still more important map is the 'Carta degli Stati di S. M. Sarda in Terra firma.' This map, the survey for which began about 1852, and the publication soon after, is on a scale of 1 : 50,000, and was to consist, when completed, of ninety-one sheets. It includes of course a very considerable portion of the Pennine range, with the Graian, Tarentaise, and Maurienne Alps. Pretentious as it is, and fairly accurate in the lower districts, it is so full of errors in the higher mountain regions that we are driven to suppose that the surveyors must have executed portions of it from their own moral consciousness in the Bureaux at Turin. In it the far-famed Isèran raises its mythic head to a height of 4,045 mètres, and the topography of the ranges about the Grivola, Paradis, Mont Emilius, and Cogne district generally, is often hopelessly wrong. A reduction of a portion of this was afterwards published, in which some corrections were made. The basis of the Swiss part of the Alpine Club Map has been the well-known 'Topographische Karte der Schweiz,' on a scale of 1 : 100,000. This map, executed under the superintendence of General G. H. Dufour, and published in 1855 and subsequent years, is on the whole an admirable performance, though it is not quite free from occasional errors of detail, especially on the southern side of the Pennine chain, and its continuation eastward. A $\frac{2}{3}$ reduction of it has also been issued for Switzerland.

Digitized by Google

For particular districts the committee would have the advantage of consulting the maps issued by the Swiss Alpine Club, especially their outline map of Sud-wallis. This corrected copy of Dufour's map, on a scale of 1 : 50,000, is printed in colours. There is but little shading except on the precipices. The contour lines on the higher slopes are in black ink, on the lower in brown, and on the snows in blue; a green tint is given to the valleys and lower pasturages. Besides the three sheets of this the committee would have the advantage of consulting the excellent maps of parts of the Pennine chain, by Mr. A. Adams Reilly. The first and best known of these is that of the Mont Blanc chain, executed from a survey by the author in 1863–4, and printed in colours with shading. The committee could compare this with and check it by the map of the 'Massif du Mont Blanc, extrait des minutes de la carte de France, levé par M. Mieulet' (Paris, 1865; 1 : 40,000);* and they could also consult several other maps of greater or less value, which may be found enumerated in the Introduction to the 'Alpine Guide.'

The English Alpine Club Map is engraved on a scale of 1 : 250,000, that of the reduced Federal Survey of Switzerland. It is published in four sheets, three of which are now completed, and the fourth (the SE. corner) is provisionally issued to subscribers in outline only. The NW. sheet contains the French and Swiss Jura, the greater part of the Swiss Lowlands, the lakes of Thun and Brienz and a very small portion of Lucerne, together with the Wetterhorn. The NE. sheet includes almost the whole of Lucerne and Constance, the greater part of the Upper Rhine Valley, and the Tyrolese Alps to the upper Innthal, the boundary line passing about six miles E. of Landeck, and is extended to include the Vintschgau as far as Schlanders. The southern boundary is at about the latitude of the Albula pass. The SW. sheet is the one which will be in the most general request among mountaineers, for it contains the Lake of Geneva, almost the whole of the Bernese Oberland, the Pennine Alps, and a considerable part of the Graians. There is thus laid before us on one sheet—a matter of no little value to the student of physical geography—a very large part of the most important regions of the Alps; for not only have we the Italian valleys of Monte Rosa up to a line a short distance E. of Domo d'Ossola and Varallo, but practically the whole hydrographical basin of the Dora Baltea; for by a slight transgression of the southern boundary, the map includes the main ridge of the Graians, S. of the Grand Paradis and St. Heléne, up to the Val Locana, and further to the W. takes in the valley of the Isère from the foot of the Col d'Isèran to Montmeillan As we have already said, the task of detailed criticism is almost a hopeless one: we have tested the map in special districts such as the neighbourhood of the Pourri, Ruitor, Grivola, Paradis, Mont Emilius, the Mischabelhörner, various parts of the Pennine chain, &c., which happen to be familiar to us and where maps are commonly wrong; and we find it accord with our recollection. In the two eastern sheets several carriage-roads are missing, but these have, we are informed, already been inserted on the plate.

* Reviewed in 'Alpine Journal,' vol. ii. p. 246.

Digitized by Google

The map is a remarkably good piece of engraving, and renders, on the whole, very correctly the physical features of the country. It leaves indeed, we think, something yet to be desired in that most difficult point, giving due prominence to the highest peaks. In this, as in most maps, it is more easy to ascertain both the position of the summits on the watersheds and the whole structure of the secondary than of the primary ridges. This difficulty is often enhanced by the colour bands, which, as a necessary concession to political geography, mark the boundaries of the several districts and governments: we think, however, that those defining the latter are unnecessarily broad and much obscure the geography of some of the most interesting parts. The apposition of two very narrow bands of different colours would, surely, have been quite sufficient, and the provincial boundaries, such as the Cantons in Switzerland, might have been reduced to mere lines. Further, when these colour boundaries are employed, we think that the broken black boundary line is needless, and might with advantage be omitted. The engraving of the names is generally clear, but in the mountain districts those of the minor villages are often obscured by the hill shading, so as to appear faint, and to be difficult to read; these might with advantage be slightly strengthened.

These remarks, however, are by way of suggestion rather than criticism. The map appears to us an excellent one and of great value. The thanks of all lovers of the Alps and students of physical geography are due to the Committee of Management, and above all to the chief editor, Mr. R. C. Nichols, whose own explorations have added much to our knowledge of the geography of the Graians and Maurienne. We hail this fruit of his labours with especial pleasure, because we think it does much to redeem the Alpine Club from the charge of being mere climbers which might with some justice be brought against its members. Far be it from us to say that a man has no right to go up a mountain for the mere healthful pleasure of a good scramble, or the simple enjoyment of a grand view; but if he do this it is sheer Philistinism for him to lose no opportunity of sneering at those who think that there is something to be found in the Alps besides health and fun, and have a weakness for carrying about thermometers, and looking whether any ozone is fool enough to be present in the atmosphere. Compared with the publications of the Swiss and Austrian Alpine Clubs, those of our own are not what we might fairly expect, and the number of papers really useful to the traveller does not bear a fair proportion to the smart sketches of scrambles, in which, after a time, the family likeness is so strong that, as in a burlesque, the coming joke casts its shadow before it. As, however, the number of unascended peaks is rapidly being reduced to a few, which are either inaccessible by fair means, or involve risks which no one with any regard for life will incur, we may trust that the 'greased pole' view of the Alps will become less fashionable, and that this map will prove to be not the supreme effort of the Club, but an earnest of much good work to come.

T. G. Bonney.

Digitized by Google