

and the Eggishorn. The hotel was gained at 4 P.M., after an expedition of unusual interest and variety, combining, it is believed, the most direct routes for traversing this fine mountain between the Ober Aletsch hut and the Eggishorn.

REVIEWS AND NOTICES.

Zeitschrift des Deutschen und Oesterreichischen Alpenvereins. xxix. 1898.

THIS volume, the fourth of the enlarged series, is fully equal, and in some respects superior, to its predecessors, and contains a vast amount of interesting matter. The illustrations are largely increased in number. There are no less than 23 full-page ones, and more than 100 smaller ones in the text. Many of these are from drawings by Mr. E. T. Compton. Some are appended to an article by him, describing some excursions in the neighbourhood of S. Caterina and the Bagni di Pejo, the principal one being the beautiful coloured frontispiece representing the Pizzo Tresero as seen from Val Furva. In this volume there is no separate list of new ascents. These appear in the fortnightly 'Mittheilungen.' But the various articles contain accounts of ascents made in recent years, which are of great and even sensational interest. Prof. Dr. F. Frich contributes an article on 'Muren,' the masses of rubbish brought down by the mountain streams in flood, which not only block up the bed of the stream, but even the valley to which it is a tributary. The extensive devastations occasioned in N. Germany in 1897 gave rise to fresh inquiries. He draws special attention to the harm done by the selection of wrong routes for railways, as in the case of the Brenner line. His general conclusion is that whatever protection woods afford in ordinary seasons, they are of no use in the case of violent rain-bursts: that the object to be sought after is the retention of the rubbish at fixed points, as by building cross dams, to produce a fall and a temporary stoppage of the flow. This we know has been adopted for many years in various countries, and he thinks in this lies the only safeguard.

Herr Ferdinand Löwl, having been employed by the D.Ö.A.V. to make a geological survey of the Glockner group, describes some of his experiences in the course of it, the chief being an ascent of the Gross Glockner, by the Hoffmannsweg, on August 11, 1897. On this occasion there was no snow in the Scharte, and the wire rope was out of reach, whilst on a previous ascent, in 1891, the snow-crest was so high that the wire was buried.

Herr Albrecht Penck, who in the last volume described the glaciers of Sonnblick, now describes a visit to the Illecillewaet Glacier, in the Selkirks. This was made on the occasion of the visit of the British Association to Canada, in September 1897, and was conducted by Mr. G. M. Dawson, the Director of the Geological Survey of Canada. The foot end of the glacier is close to the

Glacier House Station on the Pacific railway. The photographs show how the glacier has shrunk since 1888.

Herr F. Pax writes of the life of Alpine plants, and describes how the higher ones seek to defend themselves. The stems are short, the leaves thickened and gathered in rosettes, the hairs numerous and also finely divided, the plants pressed close together so as to form a continuous mass. These arrangements are rather to protect against loss of moisture than against cold. He points out that when the plants are removed to a lower situation these qualities begin to disappear. It is remarkable also that the upper Alpine flora is deficient in annuals, and that when annuals are transferred from lower to higher regions they tend to become perennials.

Herr Adolf v. Guttenberg discusses a familiar subject, the abuse of the woods in the Alps. This is, no doubt, in a large degree due to the needs of the small proprietors, and when the custom is of long standing it is difficult to cure; both the utility and beauty of the forests being destroyed by the cutting of the branches. Much has been done by instruction, and much also by enabling them to get material from other sources, as in Lungan (Upper Murthal), where the peasants are allowed to take turf free from Government property. The large proprietors are also blamed for keeping up large heads of game, which injure the young trees.

Herr F. Ramsauer writes on the calculation of the distance to which vision extends at different heights, and the extent to which it is affected by the refraction of the atmosphere, which increases the distance by upwards of one-twelfth of the length of the tangent.

Herr Hans Zwiedeneck-Südenhorst describes the campaign of 1805, with special reference to the Eastern Alps, illustrated by copies of three quaint old engravings, one representing the entrance of the French into Eisenerz (Styria), and another a dinner party, where the officers are all wearing broad cocked hats.

Herr Richard Strele, who told us so much in the last volume about the Palmesel, writes of another old custom which has not yet disappeared in Roman Catholic countries—the ringing of church bells and the firing of guns to stop storms. These were supposed to be the work of witches or evil spirits. When the edge of the bell, as happened sometimes, was broken by the violent ringing, it was said to be the witch's doing. Persons were supposed to be safe who were within sound of the bell. In course of time there were persons who pretended both to be able to produce storms and to stop them, and who made their living by it. The firing of guns at the clouds to break a storm was also common: breadcrumbs or old horseshoe nails were fired to kill the witches—the powder and shot must both be consecrated. When the practice was forbidden, about 1780, the peasants used to hide the powder and shot under portions of food, which they brought to be blessed. On one occasion, when Frederick the Great, encamped with his army at Neisse, expected a visit from the Emperor Joseph II., and

the weather looked bad, he ordered the whole army, 86,000 in number, small arms and artillery, to fire at once.

Dr. Aug. Kübler writes on the Thannheimerthal. This is a valley, or rather the upper portions of two valleys, the Vilsthal, which descends W., N., and then E. to Füssen, and the Weissenbach Thal, which descends E. and then S. to join the Lechthal above Reutte. The valley is traversed by the high road from Sonthofen to Reutte. He gives an interesting account of the scenery, the inhabitants, their history, customs, dialects, &c.

Herr Willy Rickmer-Rickmers describes three attempts to ascend the S. peak of Ushba, in the Caucasus. In one of these there were narrow escapes, first from the breaking of a snow-bridge, and then from an avalanche. At the third attempt they were not far from the col between the two peaks when forced to turn back. He believes the ascent to be hardly possible. Herr A. v. Rydzewsky describes the ascent of the Piz Badile by the W. ridge. On June 14, 1897, he started with Ch. Klucker and M. Barbaria at 8 A.M. from the Sassfora huts in the Val Bondasca. At 6.30 they passed the bergschrund. By incessant step-cutting, steps often to take both feet, up a slope varying from 51° to 56°, the spot where the great couloir divides was reached at 9. They followed the left branch, and after overcoming an icy cliff with great difficulty reached the ridge at 11.30, after more than 1,000 steps had been cut. Here they made their first halt. There were still many difficulties on the ridge, and the top was not reached till 3.50. Leaving at 4.50 they reached the Badile Club Hut at 8 P.M. Herr Fritz Benesch writes of the Rax Alp and the Wiener Schneeberg. These mountains, neither of which reaches 7,000 ft., are within 40 miles of Vienna, and the points of approach are easily reached by rail in an hour. Whilst the summit of each is an undulating plateau, their sides are in many parts surrounded by ranges of cliffs, furrowed by many ravines. Thus whilst there are some very easy routes of ascent, the ravines offer as many others, often of extreme difficulty. There are no less than fifteen marked routes up the Rax Alp, and these have become a favourite sporting ground for the young Alpinists of Vienna, caring nothing for the mountain ascent or the beautiful view, but only anxious to break a record or establish their climbing powers. There have been not a few accidents. On the Rax Alp are eight refuges, three of them being of large size and open all the winter. This has led to frequent winter ascents, and increased the number of accidents. On the Wiener Schneeberg are six refuges and one large hotel reached by a cogwheel railway 6½ miles in length, starting from Buchberg. The article is illustrated by numerous engravings from photographs taken by the author, one of them being from a relief of the Rax Alp made by himself. Herr Zeno Diener, the painter, writes of the 'Kaunser Grat.' This is the mountain range which divides the Kaunserthal from the Pitzthal, and extends from the Oelgruben Joch to the Piller Joch. The illustrations show us a series of peaks and ridges of most varied

forms, such as might attract any mountaineer, only neglected because of their mightier neighbours further S. Herr Diener has not made any ascents, but has studied, painted, and photographed the mountains from all sides and seeks to interest the tourist world in a too neglected district.

Herr Frido Kordon, in extracts from his note-book, gives us a series of pictures from various parts of the Hafner group (Malta-thal), including various ascents of the chief summit, one of them being the difficult ascent from the Rothgilden Scharte. The last excursion was on October 20, 1897, when, after climbing two summits, they were driven back by a snowstorm from the Silbereck (9,088 ft.). The Alp Pölla, from which this excursion was made, is so sheltered that the cattle were only leaving on the following day. On this occasion the Sennerin has to bake 'Almzagerlan,' a sort of Alp cake made in various forms, which must be offered on the departure of the cattle to all present to ensure good luck for the next season. Herr Kordon got a 'Gems' standing on a rock, and a hart, both of which he will keep as a memorial of his last excursion in the district.

Herr Georg Geyer describes the main range of the Carnic Alps, bounded on the N. by the valley of the Gail from Villach to Sillian in the Pusterthal, and on the S. by the head waters of the Tagliamento and Piave. He points out the best centres for tourists, describes the different mountain ascents, &c. The article is, in fact, a guide-book to the district. Herr Hans Seyffert has done the same for the southern portion of the Marmolata group. The opening of the Contrin Hut in the valley of the same name S.W. of the chief summit, in July 1897, has given a great impulse to tourists in this district. He describes a number of ascents made by himself and friends. They failed twice on the Vernel (10,500 ft.), which seems to be an exceptionally difficult mountain, which has only been ascended three or four times in the last twenty years. The most difficult ascent was that of the Marmolata (11,020 ft.) from the Scharte between it and the Klein Vernel by the ridge. He was accompanied by a friend, Dr. Dittmann, and the guide Luigi Rizzi, of Campitello. They had failed twice before, in 1895 and 1897. Leaving the Contrin Hut at 5.30 on July 21, 1898, they were in the Scharte at 7.30. All were provided with 'Kletterschuhen' and 'Steigeisen,' and the guide, in addition to the ordinary ice-axe, carried a short 'Handpick.' They had also several 'Stifte' (short iron pegs). After several very difficult passages, in which the 'Stifte' were used, they reached at 1.30 a point from which the ascent was easy, and the summit was reached at 2.35. After $\frac{1}{2}$ hr. they descended for some distance by the usual route, then turned and crossed the western glacier to the Marmolatascharte, which was reached at 5.35, and after $\frac{1}{4}$ hr. halt the Contrin Hut at 7 P.M. The mountain can easily be climbed by the line of their descent, and this will probably be a favourite excursion from the Contrin Hut. The concluding article on the group of the Rosengarten is a sequel to one in the preceding volume by the

late Mr. Norman Neruda. He was unable to complete it through ill-health, and the article has been compiled by Herr Hans Forcher-Mayr, assisted by Herr Hermann Delago. It was partly supervised by Mr. Norman Neruda, and after his lamented death in September 1898 that work was undertaken by Dr. Hans Lorenz. The group is divided into six parts, of which only three are treated of here—(1) the southern group, (2) the central group, and (3) the group of the Tschaminspitze and Valbuonkogel. The account of the central group is from the pen of Mr. Hermann Delago. The highest summit in the southern group is the Rothwand (9,215 ft.), which can be ascended without much difficulty, and commands a very fine view. The Karersee Hotel Company are going to construct a path to the summit. In the central group is the highest summit, the Rosengartenspitze (9,781 ft.). The ascent of this by the ordinary route is not difficult for trained mountaineers. More difficult is the ascent from the S., first made by Herren Santner and Merzbacher on July 31, 1887. The second ascent was made by Herr Delago alone on November 1, 1897. Still more difficult is the ascent by the E. face, effected by Messrs. Phillipmore and Raynor, with Angelo Dimai and Luigi Rizzi, on August 27, 1896, an ascent which they considered harder than any other dolomite climb. Next follow the six Vajolet Thürme, three of them being named from their first conquerors and three from their position. Both Mr. Norman Neruda and Herr Delago objected (the former strongly) to naming the peaks after the climbers, but the editorial committee thought differently. The first of the three southern needles to be ascended was the Winklerthurm, climbed by Herr G. Winkler in 1887. This has the boldest form of all the Thürme, and the performance was the more remarkable as it was made when the Kleine Zinne had only just been conquered, and was regarded as the most difficult ascent known. The Stabeler Thurm was climbed on July 16, 1892, by Dr. H. Helversen, with the guide Hans Stabeler. The third needle, which long remained unnoticed, was climbed by Herr Delago on September 22, 1895. A week before, when crossing the Santner Pass, he was attracted by this bold pinnacle and forthwith made for it. He was badly provided, having no 'Kletterschuhe,' and only a bad old rope. After crossing a rock face he got into a chimney so smooth that he had to take off both shoes and stockings. To the left of this he got on to a slope of 'Geröll.' He found traces of footsteps here, and also a small stone man which he learned had been made by the guide Stabeler a few days before. The weather here turned bad; it was very cold, and his feet, besides, were already sore, and he thought it best to return. A week later he returned, and from the terrace he climbed up a crack, then over a steep rock face, and the summit was won. The Haupt Thurm (9,255 ft.) was first climbed by Herr G. Merzbacher, with G. Bernard, on August 28, 1892. This ascent, as well as that of the North and East Thürme, is difficult, but not so difficult as that of the three southern pinnacles. The highest summit of the third group is the Grosser

Valbuonkogel (9,250 ft.). The ascent of this and its neighbours is much facilitated by the Grasleiten Hut (7,100 ft.) in the head of the Grasleitenthal. This was erected by the section Leipsic in 1888 and enlarged in 1897. On the S. side the Vajolet Hut (7,400 ft.), immediately S. of the Vajolet Thürme, affords similar convenience. Attached to this article is a map of the Rosengarten group, including the Schlern, drawn by Herr S. Simon, of Interlaken. It is on the scale of $\frac{1}{25,000}$, with lines of equal altitude at intervals of 20 metres (65 ft.). It is undoubtedly the best map of this district. The names have been fixed after consultation with many climbers acquainted with the group, and also with the authorities of Fassa. Where different names were found to be in use on the two sides, both names have been inserted. J. S.

Landes- und Reisebeschreibungen: ein Beitrag zur Bibliographie der schweizerischen Reiselitteratur, 1479-1890. By A. Wäber. (Bern: K. J. Wyss. 1899. 440 pp. 3 frs.)

The 'Bibliographie der schweizerischen Landeskunde' is a very elaborate scheme for compiling special bibliographies of almost every matter that touches the Swiss people and their land. Each department is entrusted to some competent person, and, when completed, appears as a separate work. It will be many years before the whole scheme, which has been very carefully thought out, will be entirely carried out. But two of the volumes that most interest Alpine readers have already appeared. In 1896 Professor Graf, of Bern, put forth a thick volume (712 pp., including a Supplement) devoted entirely to the maps of Switzerland, general and special. Three years later Herr Wäber (formerly editor of the 'S.A.C. Jahrbuch,' and now one of the editors of the new edition of Studer's 'Ueber Eis und Schnee'), also of Bern, published the volume of which the full title stands at the head of this notice. He modestly calls it a 'Contribution' or 'Specimen,' but it is really a practically complete list of works of travel relating to Switzerland and the immediately adjoining regions. It starts with Albert von Bonstetten's description of Switzerland (1479), and comes down nominally to 1890, though there are a good number of entries of more recent date. After a list of previous Swiss bibliographies, and of periodicals relating to travel in Switzerland (this includes a very useful list of the publications of the various Alpine clubs)—these two lists fill 16½ pp.—we come to the main portion of the work, 'Geographical and Topographical Descriptions of Switzerland and the Neighbouring Districts,' which occupies 367 pp.; 5 pp. of 'Addenda' and 'Corrigenda' follow, and the book is furnished with a most elaborate and careful index, which will be of the greatest service and will save searchers much time, though it must have cost Herr Wäber many painful hours. In the principal section of the book general works are first enumerated, and then special books, the latter being arranged according to cantons, though occasionally there is a special subdivision; e.g. the Bernese Oberland Alps fill 34 pp. to themselves. The order observed in each list is strictly chronological, the names of the authors (or the key-word of the titles of anonymous books) being printed in thick type, an excellent plan that might well have been

extended to the date of each, so that the eye could at once fall on the desired bit of information. But perhaps the most characteristic feature of this minute enumeration of works relating to Switzerland is that it includes not merely 'books' but 'articles' that have appeared, mainly in the publications of the several Alpine Clubs. This is a most practical idea, and will rejoice the hearts of many in search of the best written (in any form) on a special district; but Herr Wäber's labour in compiling this list must have been prodigious, for in his preface he tells us that he has included anything that fills two octavo pages or one quarto page. In fact Herr Wäber has cast his net far and wide, and has brought up a most curious and interesting collection of literary productions, some of which are, however, very far from having any but a bibliographical value. Save in rare cases MSS. are not mentioned, while the compiler has not gone outside Latin, English, French, Italian, and German works.

Any one who has ever tried to compile a bibliography, even of a very special subject, knows the trials that must be undergone, and the inevitable incompleteness of the list at the end, despite the most unremitting labour and care. Herr Wäber, as is clear from his preface, is well aware of both the joys and sorrows of bibliography. No doubt constant use will show that he has unintentionally omitted certain books or articles, or fallen into a certain amount of errors as to matters of fact, despite the long list of those who have helped him. But I am sure that every one interested in publications relating to Switzerland will ungrudgingly acknowledge that Herr Wäber's work is not merely an enormous advance on that of his predecessors, but that it will hold the field for many, many years. The best compliment that those who consult this most valuable and painstaking book can pay the devoted compiler is to point out to him any mistakes that they may light upon; in this way the list will more and more nearly approach perfection and exhaustive completeness.

W. A. B. COOLIDGE.

The Yorkshire Ramblers' Club Journal. (Leeds: The Yorkshire Ramblers' Club, 10 Park Street; and London: T. Fisher Unwin.) Vol. i., No. i., 1899. Price 2s.

We welcome this new proof of the energy of the Yorkshire Ramblers. It contains a varied and interesting series of articles, well illustrated and excellently printed. 'Mountaineering without Guides,' by C. Pilkington, 'The Northern Playground of Europe,' by W. Cecil Slingsby, and 'Dents des Bouquetins by the E. Face,' by L. S. Calvert, form the main part of the mountaineering bill of fare, whilst an account by Mr. E. Whymp of the new mountain aneroid barometer will doubtless awaken in the hearts of Yorkshire climbers a desire to test this excellent instrument on greater heights than can be found in the Pennine chain. Caves and pot-holes are not neglected, and the Lakeland centrist is appeased with a story of the west wall of Deep Ghyll. We congratulate the Yorkshire Ramblers on their successful enterprise, and on their happy fortune in finding so good an editor as Mr. T. Gray.

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