best. We should have been glad to see again the 'Sunset in the Rhone Valley,' one of Mr. Croft's best efforts in rendering Swiss scenery, a drawing that ought to be in the Alpine Club Collection. Excellent work there was, indeed, in the gallery, but it was chiefly of scenes very different from those by which Mr. Croft has made his name. The views of the Cornish coast showed that the artist had gained in vigour and breadth. The large painting of 'A Bit of Nature's Architecture,' exhibited some years ago at the Royal Academy, was scholarly, if rather uninteresting.

An etching recently issued by the Fine Art Society deserves mention here, inasmuch as it is one of the first attempts that we know of to render on a large scale the conventional mountain scene by means of the needle. It is from the hand of Mr. Slocombe, and represents the familiar view of the 'Matterhorn' from the path to the Riffel Alp. The view is taken apparently in the early part of the summer. Patches of snow cling about the ridge of the Hörnli and the slopes of the Schwarzsee, and the mountain itself, which is well drawn, shows a good deal of snow on its face. To some extent it is a pity that this time of year was chosen, for a certain flatness is the result, and the modelling of the east face of the mountain is almost wholly lost. In the rendering of the Gorner Glacier much conscientious work is shown, and the artist is perhaps justified in representing a rather remarkable advance of the ice. Mr. Slocombe has still something to learn of the anatomy of a glacier, and it would perhaps have been better to have given the details as they actually exist. The difficulty of dealing with the straight lines of the trees has been fairly well overcome. We may hope that the etching may meet with enough success to induce the artist to persevere in the new line that he has struck out for himself. Technically the plate is an excellent one, and the artist has on the whole succeeded well in a most difficult subject.

C. T. D.

PROCEEDINGS OF THE ALPINE CLUB.

A GENERAL MEETING of the Club was held at St. Martin's Town Hall on the evening of Tuesday, May 9, 1893, Mr. Douglas W. Freshfield, President, in the chair. A large audience, nearly 600 in number, consisting of members and their friends, including many ladies, assembled to hear Mr. W. M. Conway describe his climbing experiences in the Karakoram range. The lecture, which was followed with deep interest, was accompanied by the exhibition of some very fine photographic lantern slides. A large number of paintings and sketches by Mr. A. D. McCormick, one of Mr. Conway's party, and also some kindly lent by General Sir Michael Biddulph, K.C.B., were on view.

Before the lecture commenced the PRESIDENT said that the circumstances of that meeting perhaps needed some explanation. It was known to all the world that the meetings of the Alpine Club were generally shrouded in mystery and tobacco smoke. But on this occasion the com-

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mittee thought they might for once break through the rule of quasi-monastic seclusion which prevailed among Alpine climbers, and, consulting the greatest happiness of the greatest number, invite to the meeting the superior sex. In so doing they had followed in every respect the precedent set at the meeting held for Mr. Whymper on his return from the Andes.

Mr. Conway needed no introduction. No member of the Alpine Club was better known to his colleagues. Bred at the University of Cambridge, he went at an early age to lecture on art at Liverpool. There he fell under the benign influence of Mr. Horace Walker, the late President. He proceeded, in conjunction with Mr. Coolidge, to publish a series of Alpine guide-books, which had been described as 'the dearest little books' ever forced upon the British public. Then, with material assistance from the Royal Geographical Society, he went to India to teach the Anglo-Indian subaltern to abandon tigers and pigs, and to go after still bigger game, great peaks. It was of that journey that he was going to give an account. On the previous night at the Royal Geographical Society he had said he was not going to talk about mountaineering. He mentioned little else. Could they argue from this that that night they should hear nothing from him but what related to Buddhist temples and the latest form of Tibetan theosophy? He must now leave it to Mr. Conway to justify or refute these conjectures.

After the termination of the lecture the following discussion ensued :—

Mr. Whymper said that he thought they would all agree that the discourse they had listened to that evening was one of the most interesting and valuable, if not indeed the most important, that had ever been given to the Club ; and would unanimously desire that a very cordial and hearty vote of thanks should be given to Mr. Conway.

Owing no doubt to his modesty, Mr. Conway had not laid stress upon some matters which should be mentioned, indeed he had scarcely spoken about them at all. Upon an expedition like this there were many possibilities, and the fact that he had carried it through without mischance was a proof that he must have paid infinite attention to detail, and must have exercised ceaseless watchfulness to ensure the safety of his party.

In several ways he would have 'beaten the record' if there had been records to beat. His 60-mile tramp over moraine would probably be the 'record' of its class for a long time to come. He had established a camp at a greater elevation than anyone had done before in any part of the world, and he had seen the barometer stand lower than anyone had seen it before upon a mountain. His lowest reading was 13·260 in., which is just one-tenth of an inch lower than the Schlagintweits saw it in 1855. Some of them, no doubt, would remember that in August of that year the brothers Adolph and Robert Schlagintweit made an attempt to ascend a mountain called Ibi Gamin or Kamet, on the southern frontier of Tibet. Like Mr. Conway, they travelled up a long glacier by short stages, and encamped at gradually increasing elevations. Their highest camp was 19,360 ft. above the

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sea, and the greatest height they reached on their final effort was 22,250 ft. Mr. Conway had beaten them by 200 ft. or 250 ft., and *his* highest point was believed to be the loftiest which had ever been determined from observations on the spot, and, possibly, the loftiest that had ever been trodden by human foot.

Claims, they knew, had been made to have reached greater heights. Some seven or eight years ago Mr. Graham stated that he had got to the height of 24,000 ft. in the Eastern Himalayas. But, in regard to this, he must be permitted to say that he could not understand how anyone could reach the height of 24,000 ft. without being in some way affected by the great fall in atmospheric pressure. At 24,000 ft. above the sea the barometer would stand about three-quarters of an inch lower than Mr. Conway saw it, or at about 12½ in., and it was hard to understand how anyone could work hard at a pressure of 12½ in. without being very sensibly affected. The Schlagintweits had spoken very emphatically on this subject. They said that at their greatest elevation (= 13·360 in.) they had never felt so exhausted. It would be very interesting to the meeting if Mr. Conway would favour it with *his* views upon this subject, which was bound up with the future of mountaineering, He had great pleasure in proposing that a very cordial and hearty vote of thanks be given to Mr. Conway for his admirable discourse.

Professor BONNEY said that Mr. Conway had justly complained of these moraines, but had avenged himself by picking up pieces of them and bringing them home that they might be tortured in the laboratory, where they had disclosed some interesting results. These specimens corresponded very closely with the gneiss, granite, and serpentine found in certain parts of the Alps, and with some of the peculiar schists which occur to the east of Monte Leone. They must have been subjected to tremendous pressure. The Golden Throne rock, so far as he could tell at present, appeared to be volcanic in origin; the red stains were caused by red oxide of iron, but the most interesting mineral brought back was piedmontite, a manganese-epidote, found also at San Marcel, in the Graian Alps, and in Japan. He heartily seconded the vote of thanks to Mr. Conway.

Mr. CLINTON DENT said that the mere mountaineering difficulties which Mr. Conway had overcome were very great, and he had displayed great acumen in dealing with them. Here was a further proof that the mountaineer's craft was essential for the traveller in such regions, and that it could best be learned in the Alps. High mountaineering in such a district as the Karakoram would make great demands on the climbers of the future. Work in the Alps was mere toy mountaineering in comparison. The prodigious length of the expeditions, the complexity of the ice fields, the extent of the ice falls, the tremendous effects produced in the rock peaks by weathering, constituted colossal, though he would not say insuperable obstacles to the ascent of even minor summits. He still held, and on the whole Mr. Conway's experiences strengthened him in the belief, that the ascent of the highest mountain in the world was a possibility. Very interesting was the observation made in the Pioneer Peak that exertion was much more

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arduous when the air was still—even a slight puff of wind brought relief at once. In Saussure's time mountaineers ascribed the distress they experienced in high places to some inherent obnoxious property of 'stagnant' air. This view, it was now seen, was not so erroneous as some had supposed. Mr. Conway's contribution to the great elevation question, as affecting mountaineering in the future, was a very valuable and important one. With all deference to Mr. Whymper, he did not think that the whole question was to be gauged by barometrical pressure alone. Other factors had to be taken into consideration; one, and not the least of these, was the personal equation. He was in hopes that one day the equation would work out to some such result as this:—Conway + Indian Government ^{2} = K2.

The PRESIDENT said that Mr. Conway had shown what good scientific work a climber could turn out. During his fifteen years at the Geographical Society he had seen no work of its kind—no glacier survey—so good as the map which Mr. Conway had made. He had taken Mr. Conway's character as a traveller from his guide, Zurbriggen. He said: 'I had to work all day, and I lost my temper. My Herr worked all day, and all night too, and never lost his temper.' The conduct of the Gurkhas showed the possibility of making these Gurkhas excellent glacier guides. The Committee had decided, with the entire approval of their Colonel, to make a present to each of these men, as a testimonial from the Alpine Club to their services. As to the rarity of the air question, his own experience on Elbruz (18,500 ft.) was that none of his party suffered from the rarity of the air, while in the next ascent a majority of the climbers were severely affected. A gale seemed always to afford great relief. He was perfectly convinced that a great altitude might be attained in Sikkim with more ease than in the Karakoram, and he was in hopes that 25,000 ft. would before long be reached. At a future meeting of the Alpine Club he hoped that a beautiful set of photographs by Sir Benjamin Simpson of this region might be exhibited. He now called attention to the admirable sketches hung on the wall, taken by Mr. McCormick, Mr. Conway's companion.

A vote of thanks was heartily accorded.

Mr. CONWAY, in returning thanks, said that he accepted the kind recognition of the meeting as directed fully as much to his travelling companion as to himself. He had on previous occasions publicly expressed his obligations to Mr. Bruce and Mr. McCormick, and he could only repeat them again. As to the question of the effect of diminished pressure upon climbers there was much to be said, but the subject was too large for treatment on that occasion. It was worth notice that along a certain stretch of glacier, whose lowest point was 15,800 ft., and the highest 16,500 ft., every single member of the party, European and native, felt discomfort. They traversed this portion of glacier on five different occasions, and never failed to experience the sensations referred to. There were many disturbing factors to be considered—the nature of the weather, the form of the surface, and the nature of the ground, whether of snow or rock. It seemed possible to become habituated to altitudes of as much as 18,000 ft.,

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but above that level they grew daily worse. Above 20,000 ft. they soon became, and thenceforward continued, miserable till they returned to lower levels. They felt discomfort from diminished pressure down to a lower level in the descent than the point where they had first experienced it in the ascent. The whole question was a difficult one, and its full solution could not be expected till more observations had been made.

A General Meeting of the Club was held at the Club Rooms on the evening of Tuesday, June 6, Mr. Douglas W. Freshfield, President, in the chair.

The following candidates were balloted for, and elected members of the Club:—Dr. Tempest Anderson, Francis Aston-Binns, Arthur Robert Hamilton, Professor William Haslam Heaton, Dr. John Hervey Jones.

A specimen of the field-glasses which the Club had decided to present, together with suitable testimonials, to Parbir Thapa, Harkbir Thapa, Amar Sing Thapa, and Karbir Thapa, all of the 1st Battalion of the 5th Gurkha Regiment, who accompanied Mr. Conway in his Karakoram expedition, was submitted to the meeting.

Mr. Ellis Carr read a paper entitled 'Two Days on an Ice Slope,' after which a short discussion ensued, in which Mr. Conway and Mr. Slingsby took part. The former, in the course of his remarks, warmly advocated the more general use of crampons. He had employed them with the greatest advantage in the Karakoram, and believed that had they been used in the remarkable expedition described by Mr. Carr much of the labour which it was found necessary to expend on step-cutting might have been avoided, as smaller steps would have sufficed.

Mr. Slingsby, after drawing attention to the especial beauty of Mr. Carr's sketches, and to the fact that they were drawn principally after photographs taken from the opposite side of the Chamonix valley, and regretting the absence of Mr. Mummery, said that though on the unsuccessful attempt to climb the Aiguille du Plan he went merely as a third man on the rope, knowing nothing about the mountain, he was glad to have an opportunity of saying a few words about some of the most characteristic features of the expedition. They were the extraordinary persistency of the difficulties on the mountain as a whole—the especial difficulty of the ice-wall, really a frozen waterfall on the top of a slope as steep as that at the summit of the Moming, which was by far the most severe work that any of the party had ever encountered; the skill shown by Mr. Mummery, both in ascending and descending this ice-wall, which can hardly be over-estimated; the utter absence of resting-places on the mountain face, as, except near the foot of the chimney, there was no place where the whole party could sit down without holding on; the deception of the mountain generally, and as the traveller of old was lured to the green depths of the Rhine by the Lorelei, so were they drawn ever onward, ever upward, by the spirit of the mountains, by the promise of good snow and easier going, only to find, after ten or a dozen steps, hard ice again below a thin and deceptive covering of snow. If any other members of the Alpine Club

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had had the good fortune to have been there they too would have been lured onwards, especially after the little glacier which hangs on the middle of the face had been reached, because above this glacier there are three parallel and horizontal belts of snow, which are well seen from Chamonix, which are more or less connected by little couloirs, and which gave to the party every promise of success. They did reach the top of the second belt of snow, and all but succeeded in climbing to the top of the mountain. This face can be climbed, and though it must at all times be difficult it is not dangerous if proper precautions be taken. Last, but not least, he spoke of Mr. Carr's most successful efforts to keep the party in good spirits by singing innumerable songs during the whole of the dark cold night, which were most welcome.

The proceedings terminated with a very hearty vote of thanks to Mr. Carr, both for his interesting paper and for the beautiful drawings with which it was illustrated.*

The Summer Dinner was held at the Ship Hotel, Greenwich, on Wednesday, June 7, Mr. Douglas W. Freshfield, President, in the chair. Fifty-two members and guests were present, most of whom availed themselves of the special steamer both in going and returning.

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* Photographic reproductions of these are given with the paper in the current number.

Errata.

Page 283, line 10, *for* 'inferior' *read* 'interior'; line 2 from bottom, *for* 'and' *read* 'is'
„ 395, „ 5, *for* 'At I' *read* 'B fore beginning to ascend again'
„ 396, „ 5 from bottom, *for* 'at I' *read* 'where we had left them'

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