was 13 hrs., to which must be added 3½ hrs. for halts on Mont Blanc du Tacul, Mont Maudit, Mont Blanc, and the Pierre Pointue. An expedition of more varied interest it would be difficult to devise. J. S. M.

THE FIRST ASCENT OF JÆKKEVARRE.—Mr. Hermann Woolley writes to us to point out that he did not take part in this climb, though the account in the 'Alpine Journal,' No. 139, p. 65, conveys the impression that he was one of the party.

MR. WHYMPER'S 'GUIDES.'—We are glad to see that the 'Chamonix Guide' has reached a third and the 'Zermatt Guide' a second edition. They seem as far as possible to have been brought up to date—*e.g.* on p. viii of the latter we find a notice that the inauguration of the cabane on the Col de Bertol is fixed for August 6, 7, and 8.

MONTE ROSA.—The Rev. F. T. Wethered writes to us to point out that the statement in 'Alpine Journal,' vol. xix. p. 153, that Mr. E. S. Kennedy ascended Monte Rosa in 1854 is liable to misapprehension, as the point really climbed was the Ost Spitze, the lower pinnacle of the Dufour Spitze.

PROCEEDINGS OF THE ALPINE CLUB.

A GENERAL MEETING of the Club was held in the Hall on Tuesday evening, May 3, at 8.30 P.M., Mr. Charles Pilkington, *President*, in the chair.

Messrs. G. L. Collins and R. F. Norton were balloted for and elected members of the Club.

On the motion of the President, seconded by Mr. Horace Walker, Sir H. Bergne was elected a member of Committee in place of Mr. J. Heelis.

The PRESIDENT said: 'When at our last meeting I spoke of the death of Mr. James Heelis, as creating the first gap in an old circle of Lancashire mountaineers, I little thought that there was even then another name to be added to the list, and that the breach was wider than I thought. Frank Hartley was an active mountaineer and excellent cragsman, whose name was better known some fifteen years ago, when the brothers Hartley were two of our most energetic and successful members. He was one of those happy men who never had an enemy. His cheerful face was the outward sign of a kind and sympathetic heart, and brought forth a responsive smile whenever he came amongst us, and those who knew him well in the days gone by will long regret that that bright and genial nature has passed away.'

The PRESIDENT considered that the Picture Exhibition Sub-Committee was to be congratulated on the excellent show of pictures now hung upon the walls, and he was sure the Club would express very hearty thanks to Mr. MacWhirter and to Mr. Parsons for the interesting sketches they had sent, which showed that for good art it was not necessary to be untrue to nature. He also drew

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attention to two gifts to the Club, the one a very fine specimen of a chamois head, presented by Mr. G. Stallard, and the other two very interesting coloured prints of Saussure on Mont Blanc, presented by Mr. A. B. Thorold.

Mr. STUART M. VINES read a paper on 'The Ascents of Aconcagua and Tupungato,' which was illustrated by lantern slides.

Mr. FITZGERALD thought he could add nothing to the paper, as he was himself obliged to give in after reaching 20,000 ft., owing to digestive disturbances.

Mr. HUNTLY-GORDON said that he had been over the same ground eighteen months ago, and could quite agree with all that had been said of the hardships. He took some credit to himself that what he had told Mr. Lightbody of his trip had perhaps fired him to take part in Mr. Fitzgerald's expedition. He thought that the determination shown by Mr. Vines was little short of heroism.

Mr. WHYMPER had no doubt the Club would agree with him in heartily congratulating Mr. Vines on his ascent, and themselves in receiving Mr. Vines as a member.

Mr. FRESHFIELD mentioned that Mr. Hinchliff and Mr. Ball had both seen Aconcagua, but had been uncertain whether it was volcanic. He heartily congratulated Mr. Vines and Mr. Fitzgerald.

Mr. MATHEWS thought it would be interesting to know Mr. Vines's experiences at 22,000 ft., with reference to the possibility of ascending to 29,000 ft., the greatest mountain height.

Sir MARTIN CONWAY thought that in the case of a big expedition far from a base as much credit was due to the organiser as to those who took part in the ascents. He yielded to no one in his admiration of Mr. Vines's pluck and endurance. Neither Mr. Vines nor Mr. Fitzgerald made any claim with reference to the comparative heights of Pioneer Peak and Aconcagua, but he had no doubt that Aconcagua was the higher, and that Mr. Vines had reached the greatest height yet climbed. The Club ought not to forget to put on record their appreciation of Mr. Fitzgerald's organising capacity, and the mere fact that he had not been able to climb the last 1,500 ft. by no means detracted from his merit in carrying through a most important expedition. He drew attention to the excellence of the survey work which had been done, the difficulties of which he well knew in a country where the weather was uncertain, and where all delicate operations have to be carried out with trembling fingers that refuse to do their work and a body that declines to keep still at the most critical moments. After the strain of some weeks of such work a man was tempted to make guesses and to slur over work in face of unfavourable conditions. It was the good fortune of the Club that in two great expeditions by members in South America, by Mr. Whymper and by Mr. Fitzgerald, the topographical work was of the first order. He had been made acquainted with the details of Mr. Fitzgerald's survey work, and could, without fear of contradiction, say that better work than his had never been done. Upon that work the reputation of the expedition ultimately depended. He did not in any way detract from the praise given to Mr. Vines for his

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climbs; those were great achievements, and would always remain so, and be one of the great stages in the advance to higher and higher altitudes. The observations of the expedition on the effects of high altitudes concurred remarkably with his own in the Himalayas. The sudden effect of the retarded movement of the air in the couloir and the great relief found on the top of Aconcagua, where they were again exposed to freely moving air, corresponded with his own experience on the summit of Pioneer Peak.

Mr. J. BRYCE asked if geological specimens had been brought from the summit. With regard to the influence of altitude, he thought observations should be taken from moderate as well as from great heights, as the effects were felt at 7,000 ft. in the Rockies. He considered that there was much in the personal equation, as Mr. Vines had not suffered so much as the experienced guides. He greatly admired Mr. Vines's courage and confidence in going to the summit at sunset, as every mountaineer knew what resolution was required to face darkness and its attendant dangers at a high altitude.

Mr. O. G. JONES thought the food question was of great importance with regard to the effects of high altitude, and suggested that experiments might be made before the starting of an expedition.

Mr. LIGHTBODY thought it would be very difficult to obtain similar circumstances in which to test the food. What they had taken had been thoroughly tested at low altitudes; but when they ascended they found that methylated spirits would not burn, which they could not have told beforehand; the limit seemed to be about 17,500 ft. He had himself not gone further than 19,000, and had felt very sorry that he had gone so far, feeling so ill that he was quite indifferent as to whether he were ever to descend again or not. Their measurements had been taken with both aneroid and mercurial barometers, and also independently by means of careful levels taken with a 6-inch theodolite. His observations carried on the accurate levels which had been taken by the railway engineers to Mendoza, and, as he was himself an engineer, and was careful to keep his instrument thoroughly adjusted, he was confident that his measurements of the summits by triangulation could be relied upon.

Mr. HASKETT-SMITH also spoke.

The PRESIDENT read a passage from 'Over the Seas and Far Away' (see p. 166), in which Mr. Hinchliff, when actually in sight of Aconcagua, wrote that he considered that man would never reach its summit, as he could not rise above 21,500 ft. He much regretted that Mr. Fitzgerald had been unable to reach the highest summit. He admired the straightforward, modest account which Mr. Vines had given, and hoped that he would in the future do much further good work.

Mr. VINES replied that it was entirely owing to the organisation of the expedition that he had been able to reach the summit of Aconcagua. Professor Bonney considered that Aconcagua was an extinct volcano, though how many thousand years it was since the

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period of its activity it was impossible to say. As regards the effect of altitude, he thought that younger men suffered more than older.

A hearty vote of thanks was accorded to Mr. Vines, and the proceedings terminated.

A GENERAL MEETING was held in the Hall of the Club on Tuesday evening, June 7, at 8.30 P.M., Mr. Charles Pilkington, *President*, in the chair.

Mr. C. T. DENT read a paper on 'The Ascent of Tsiteli (Central Caucasus),' which was illustrated by lantern slides.

Mr. WOOLLEY said that every expedition in the Caucasus carried with it the excitement of discovery, though it did not always happen that, as on this expedition, no checks were met with. Their only difficulty had been the soft snow over 12,000 ft. There was much to be done yet on the N. and S. side of the Urukh valley, to which they had paid only a flying visit. There seemed to be an impression among members that there was little of importance now remaining to be done in the Caucasus, whereas, on the contrary, some of the finest peaks were still virgin.

Mr. SOLLY asked if the taking of Swiss guides added to the pleasure or success of Caucasian climbing. The condition of the snow, which, during the descent, often made it necessary to kick steps, facing the mountain, was a danger the greatness of which Alpine experience gave one no chance of estimating. He had found that the descent of Caucasian mountains often took as long as the ascent. He thought Svetga which had been mentioned, could be climbed from another side. His party had tried it till the slope took an angle of 70°, when they thought it too dangerous to continue.

The PRESIDENT drew attention to some of Mr. McCormick's pictures of the Caucasus which were hung on the walls.

Mr. DENT replied that Swiss guides, if taken to the Caucasus, did not add to the pleasure of the expedition, though they undoubtedly enabled one to do more work and cover more ground. They were useful in matters of detail, and their experience often saved time in choosing one's line of attack. Mr. Freshfield, in the map attached to his 'Exploration of the Caucasus,' had depicted the range of Laboda and Tsiteli as granitic, but these mountains were just outside the granitic limit and were of crystalline schist and very friable. That the descent in the Caucasus took as long as the ascent was generally true.

Mr. FRESHFIELD endorsed what Mr. Woolley had said as to the amount of exploration and research which remained for travellers in the Caucasus.

The proceedings terminated with a hearty vote of thanks to Mr. Dent.

Specimens of a patent 'puttie' invented by Mr. Fox, of Wellington, were exhibited after the paper.

THE SUMMER DINNER was not held this year, owing to the number of applications received by May 20 being less than the number required by Rule X.

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