June 28. Send coolies to investigate north and west faces of Chumiomo. Unsuccessful.
29 to July 4. Wait for Sirdar, who should have arrived on June 25.
July 5. Cross Lungnak La.
7. Advance to south-west face of Chumiomo—mist and snow. Route practicable but somewhat difficult. Rock falls common.
9. Circle round to north-west of Chumiomo. Camp about 18,500 ft.
10. Camp at 19,500 ft.
12. Ascend to summit of Chumiomo (22,430 ft.).
13. Thango.
25. Darjeeling.
30. Arrive at Katgodam and push on to Bhim Thal.
Aug. 1. Almora.
4. Gwaldam.
10. Cross Kuari La. Heavy rains.
11. Joshimath. Letter from Deputy Commissioner of Garhwal prohibiting further advance.
13. Reach Badrinath.
16. Start for Kamet.
19. Ascend to 16,500 ft. Khaiam Glacier.
20. Ascend to Khaiam Pass (19,300 ft.).
21. Move up camp to 18,500 ft.
22. Re-ascend pass and examine west face of Kamet. Climb snow peak near top of pass 20,200 ft.
24. Camp at foot of Donerau Glacier.
25. Advance to north-east source of Donerau Glacier.
26. Ascend Donerau Peak (19,000 ft.) and examine north and north-west faces of Kamet. Retreat to Mana.
27. Joshimath.
29. Recross the Kuari La.
Sept. 9. Leave Bombay for London.

IN MEMORIAM.

EDWARD WHYMPER.

EDWARD WHYMPER, born April 27, 1840, was the son of Josiah W. Whymper by his first wife, Elizabeth Claridge. His father, the son of an Ipswich brewer, was himself of an artistic temperament. He walked up to London with the traditional few shillings in his pocket, made an improvident marriage and became the father of eleven children. But his talent overcame all obstacles and justified

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Edward Whymper.

(at the age of 25)

Born 1840 *Died 1911*

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his choice of a career. He made a name both as an etcher-engraver and as an original artist, and died a Member of the Royal Society of Painters in Water-Colours, leaving behind him a well-established business for the production of book illustrations. Among his pupils were Frederick Walker, A.R.A., and Keene—one of the finest draughtsmen of his time, well known afterwards from his contributions to 'Punch.'

Edward was the second son in this large family. He was privately educated. While still a youth he entered his father's business in Lambeth and in time succeeded to its control. For many years he maintained its reputation for the production of the highest class of book illustrations until towards the close of the last century the improvement in cheap photographic processes destroyed the demand for such work. His hand may be recognised in many books of travel between 1865 and 1895; among his more important productions may be mentioned Wolf's 'Wild Animals,' and 'Picturesque Europe.' He superintended for a short time the artistic branch of Messrs. Cassell's business as publishers.

Edward, although he seldom exhibited, was, like his father, a water-colour artist of considerable ability, and it was to this gift that he owed a commission that proved a turning point in his life. In 1860 William Longman, afterwards President of the Alpine Club—a member of the firm of publishers—needed illustrations of the then little-known mountains of Dauphiné for the second series of 'Peaks, Passes, and Glaciers,' and young Whymper was sent out to make drawings for this purpose. He states ('Alpine Journal,' vol. v. p. 161) that he saw in the chance of going to the Alps a step towards training himself for employment in Arctic exploration, an object of his early ambition. In the following year he proved his ability as a mountaineer by climbing Mt. Pelvoux ('Peaks, Passes, and Glaciers,' 2nd Series). In the seasons of 1862–65 by a series of brilliant climbs on peaks and passes he made himself one of the leading figures in the conquest of the Alps. In 1864 he took part in the first ascents of the highest mountain in Dauphiné, the Pointe des Ecrins, and of several peaks in the chain of Mont Blanc. In 1865 he climbed the W. peak of the Grandes Jorasses and the Aiguille Verte.

Whymper's fixed ambition, however, during this period, was to conquer the reputedly inaccessible Matterhorn. In this he had formidable rivals in Prof. Tyndall and the famous Italian guides, the Carrels of Val Tournanche. He made no fewer than seven attempts on the mountain from the Italian side, which were all foiled by the continuous difficulties of the climb, or by bad weather. In one of these, while climbing alone he met with a serious accident. At last the plan of trying the Zermatt ridge was adopted and success was gained at the first attempt. The details of the tragic sequel are well known. The party, from no fault of Whymper's, was too large and ill-constituted for such an adventure. The youngest member

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of it, a lad inexperienced in rock-climbing, fell on the descent and dragged over with him three of his companions, among them the famous guide, Michel Croz. The rope broke and Whymper was left with the two Taugwalders clinging to the mountain side, while his companions disappeared from sight over the precipice. Investigation showed that the rope that broke was a spare piece of inferior quality. Whether it was accidentally used by the Taugwalders is a point which has never been satisfactorily cleared up, and on which Whymper himself never expressed a positive opinion.

This terrible catastrophe gave Whymper an European reputation in connexion with the Matterhorn, which was extended and maintained by the volume in which, six years afterwards, he told the story with dramatic skill and emphasis. It terminated, however, his active career as an Alpine climber, though he often subsequently visited the Alps and once repeated his ascent of the Matterhorn for literary purposes.

In 1867 he turned his attention to Greenland with the idea of ascertaining the nature of the interior and, if possible, crossing it. A second preliminary trip in 1872 convinced him that the task was too great for his private resources. The literary and scientific results of his journey were three entertaining papers in the 'Alpine Journal' (vols. v. and vi.), a lecture to the British Association (39th Report, 1869) and a paper by Prof. Heer ('Philosophical Transactions,' 1869, p. 445) on the fossils, trees and shrubs collected. The chief practical result was to show that the interior of Greenland was a snowy plateau which could be traversed by sledges provided the start was made sufficiently early in the season, and thus to pave the way for Nansen's success in 1888.

In 1880 Whymper turned his attention to the Andes of Ecuador. At that date the still unsettled problem of the power of resistance, or adaptation, of the human frame to the atmosphere of high altitudes was being vigorously discussed. Whymper proposed as his main object to make experiments at heights about and over 20,000 ft. The results he obtained, if they did not settle a question complicated by many physical, local and personal variations, served to advance our knowledge and have been in important respects confirmed by the experiences of Dr. Longstaff, Dr. Kellas, the Duke of the Abruzzi and others at still higher levels between 20,000 and 25,000 ft.

From a climber's point of view the expedition was completely successful. The summits of Chimborazo, and six other mountains of between 15,000 and 20,000 ft., were reached for the first time. A night was spent on the top of Cotopaxi, and the features of that great volcano were thoroughly studied. Shortly after his return Whymper read a paper on his explorations in the Andes at a meeting of the Club which was honoured by the presence of the then Prince of Wales, Edward VII. From the wider point of view of the geographer and the general traveller Whymper brought home

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much valuable material which was carefully condensed and embodied in the volume published twelve years later (1892). Its value was recognised by the Council of the Royal Geographical Society, which in 1892 conferred on Whymper one of their gold medals in recognition of the fact that—apart from his mountaineering exploits—' he had largely corrected and added to our geographical and physical knowledge of the mountain systems of Ecuador, fixed the position of all the great Ecuadorian mountains, produced a map constructed from original theodolite observations extending over 250 miles, and ascertained seventy altitudes by means of three mercurial barometers.'

The Society also made a grant to the family of his leading guide J. A. Carrel of Val Tournanche, ' to mark their appreciation of the high services he had rendered to geographical science.'

For these explorations Whymper devised the form of mountain tent, known by his name, which is still in general use with explorers. He also suggested sundry improvements in aneroid barometers.

In 1901 and several subsequent summers, Whymper visited the Canadian Rocky Mountains, but did not make any extensive explorations or publish any account of his journeys.

With strangers Whymper's manner was apt to be reserved and sometimes self-assertive. But amongst acquaintances and persons interested in the same topics with himself his talk was shrewd, instructive and entertaining. He was by instinct both a craftsman and an artist. With these gifts he coupled great physical endurance and intellectual patience and perseverance, qualities which he displayed both on the mountains and in his business. In everything he aimed at thoroughness. He would never, if he could help it, put up with inferior material or indifferent workmanship. To his own volumes he devoted years of careful preparation. Finding his craft practically brought to an end Whymper employed his leisure mainly in compiling and keeping up to date two local handbooks to Chamonix and Zermatt. Well illustrated, and not devoid of personal and picturesque touches, these attained high popularity and passed in his lifetime through fifteen editions. In the autumn of 1911 Whymper paid his last visit to the Alps and made what was destined to be a final round of his old familiar haunts. He first stayed some time at Zermatt, where he met various old friends, and then crossed to Grindelwald and Bern, where he paid promised visits to Dr. Coolidge and Dr. Dübi. From Bern he went on to Chamonix where he died suddenly on September 16th. His health had been manifestly failing for some time previously and his broken appearance in the spring had given cause for serious anxiety to his friends. He was buried in the churchyard of the English Church at Chamonix, being carried to his grave by members of the Corporation des Guides.

Whymper was, as stated above, a Gold Medallist of the Royal Geographical Society; from 1872 to 1874 he served as a Vice-President of the Alpine Club. In 1872 he was created a knight of the

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Italian Order of St. Maurice and St. Lazarus. He was an Honorary Member of the French Geographical Society and of most of the principal mountaineering Clubs of Europe and North America. He married in 1906 Edith Mary Lewin, by whom he left a daughter.

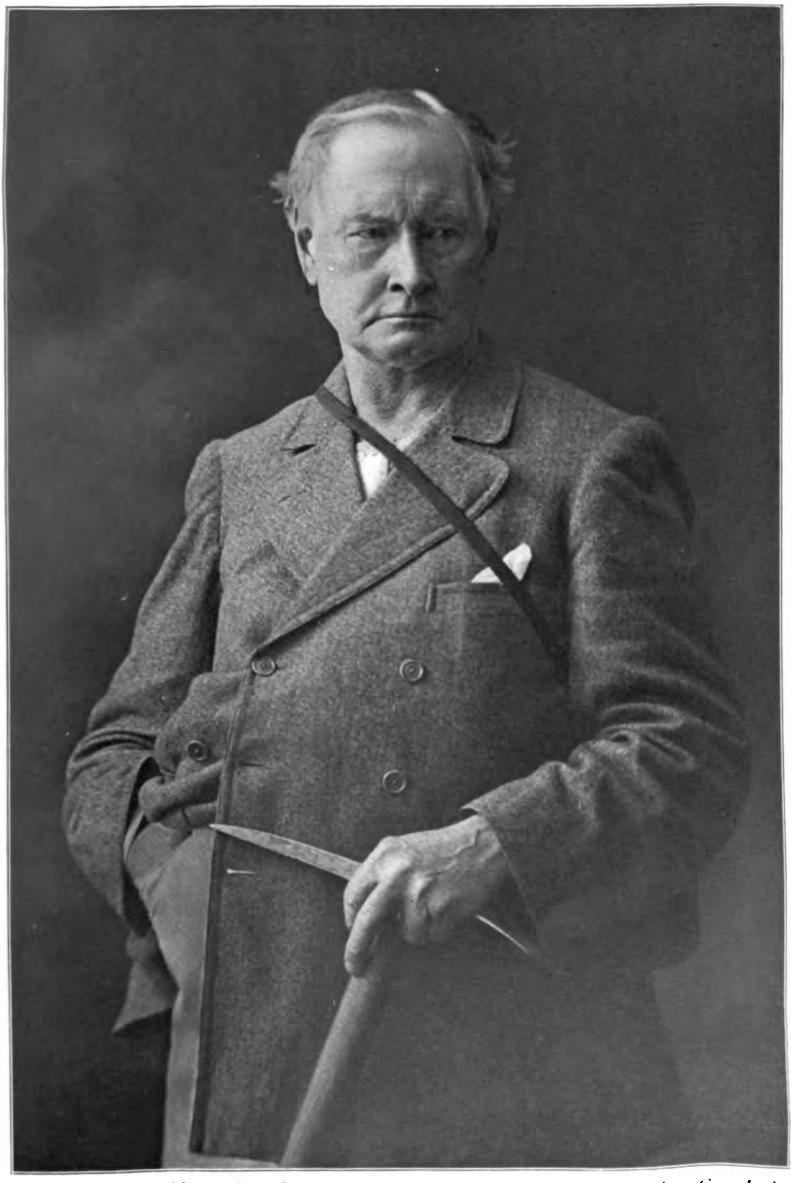
There is a good photograph of him in his later years at the Alpine Club. His portrait also appears in several of the illustrations to his books. Whymper's principal published works were: 'Scrambles amongst the Alps,' 1871; 'The Ascent of the Matterhorn,' 1880; 'How to use the Aneroid Barometer,' 1891; 'Travels amongst the Great Andes of the Equator,' 1892; 'Guide to Chamonix and Mont Blanc' 1896; 'Guide to the Zermatt District and the Matterhorn,' 1897; articles on Greenland, 'Alpine Journal' vols. v. and vi.

THE SCIENTIFIC WORK OF EDWARD WHYMPER, F.R.S.E. AND F.R.G.S.

THOUGH Edward Whymper, so far as I know, never received any scientific training, he made very considerable additions to natural knowledge, which perhaps were a little thrown into the shade by his repute as a mountaineer. Thoroughness and tenacity of purpose characterised his work, whatever that might be; he was a careful collector and a keen observer, who might be trusted not to miss anything worthy of notice. He spared no pains before a journey in making all the preparations which should contribute to its success, or after it in working out the results, so that the accounts of his travels will for long be valuable as books of reference for certain districts. These are four: the Alps, Western Greenland, the Ecuadorian Andes, and the mountains of Western Canada. By treating them separately we can the better show the nature of the work which he accomplished in each.

His first published volume—'Scrambles amongst the Alps'—at once made it clear that he was far more than a lover of a particular type either of gymnastics or of scenery, and its third chapter affords an excellent indication of his mental characteristics. This gives a description of the 'Fell railway' which had been carried across the Mont Cenis pass to bridge over the gap in the railway from Paris to Turin, while the tunnel between Modane and Bardonèche was being made. His account of the plan, construction, and machinery could not well be more precise and clear, and will always be valuable as the history of an important episode in the progress of mountain railways. Scattered through the book are interesting notices of the habits of the people, which in the earlier days of his travels had but little changed, in some districts of the French and Italian Alps, from the end of the previous century; together with notes on the bouquetin, the chamois, and flowers growing at high

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M. Willmann, Chamonix, photo. *Swan Electric Engraving Co., Ltd.*

Edward Whymper,
Oct. 1910

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altitudes; but he keeps most constantly in view the sculpturing action of running water and of ice. These, which are especially described in the sixth chapter, receive further illustration from his experiences in Greenland, which he had visited after his chief expeditions in the Alps, but before publishing the book. It would be difficult to find clearer or more accurate accounts of the forms resulting from the action of torrents and of glaciers, and his conclusions are adverse, not only to the lake-excavating hypothesis of Ramsay and the valley-making one of Tyndall, which at that day chiefly occupied attention, but also to the resuscitation of the last, varieties of which have rather suddenly won so many adherents among the geologists of North America and Europe, not forgetting our own islands. Whymper, reasoning from his own wide and varied experience, utterly discredits (by anticipation) the 'plucking,' 'sapping,' and other digging powers now so freely claimed for glaciers, and comes to the conclusion 'that glaciers, in their life as well as after their death, either considered by themselves or in comparison with other powers, should be regarded as eminently conservative in their acts and in their intentions' ('Scrambles,' p. 154). Besides this he paid considerable attention to the veined structure of glacier ice, the explanation of which had led to much controversy, especially between Forbes and Tyndall, and he gave another example of the thoroughness of his methods by employing men to dig a pit into the snow at the top of the Col de Valpelline. Though the results, from various causes, one being the extreme badness of the weather, were less successful than he had hoped, the excavation was carried to a depth of about 22 feet and showed some interesting facts illustrative of the passage from snow to blue ice.

He visited Greenland in 1867 and 1872. In the first of these journeys he made an attempt to discover the mysteries of the inland ice, which, however, from causes beyond his own control, met with but little success. Still it and his other studies made some interesting and important additions to his knowledge of ice action in a region where it forms a sheet instead of valley glaciers, and he made a good collection representative of the 'stone age' in Greenland, which only came to an end about a couple of centuries ago. Another purpose of his journey was to obtain a large series of specimens of the fossil plants which occur in Disco Bay. In this he was very successful, and brought to England a collection which was afterwards described, with extracts from Whymper's 'Report on the Geology,' by Professor O. Heer in the 'Philosophical Transactions' for 1869 (vol. 159, p. 445). It contained eighty species, twenty-five of which were new.

But his journey in the Andes of Ecuador, which occupied several months of 1880, was his most important piece of scientific work, for which he made all possible preparations and secured the aid of Jean Antoine and Louis Carrel. Whymper's chief aim, in addition to

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investigating those volcanic giants, which crown the elevated plateau where Quito stands at well over 9000 feet above sea-level, was to study the effect of a much diminished atmospheric pressure upon the human frame (a subject on which very contradictory opinions then prevailed), to compare the values of boiling-point observations, the aneroid and the mercurial barometers, in the measurements of heights, and to collect rocks, plants, and animals from the greater altitudes. His efforts were successful. He made scientific surveys of important areas; twelve times reached positions more than fifteen thousand feet above sea-level, gaining two summits above 17,000 feet, three above 19,000 feet, and twice ascending Chimborazo, which is well over 20,000 feet, and, like more than half the others, had not been previously climbed. He spent a night on the summit of Cotopaxi, and afterwards saw it burst into sudden eruption during his second ascent of Chimborazo, where he watched the cloud of dark dust from its crater as it drifted through the upper air till at last, while he was seated on the summit, it came down and sullied the snow after an aerial journey of more than sixty miles. He brought back to England a number of rock specimens and volcanic dusts representative of the several mountains, which were described by the writer in five papers published in the 'Proceedings of the Royal Society' (Nos. 229–234), together with collections of plants, insects, and other animals. To a description of these and other scientific results the supplementary volume to his 'Travels among the Great Andes of Ecuador' (1892) is more especially devoted, but of them, important as they were, a very brief summary must suffice. Among the insects collected from the level of the sea up to 8000 feet, 16 per cent. were new to science; of the 160 species from 8000 feet upwards, 60 per cent. were previously unknown; all taken higher than 15,000 feet being new. Crustacea appear to be scarce, and only five representatives were obtained, all of which were previously known. The reptilia were represented by three species of lizards and two of snakes, only one of the former ranging up to 12,000 feet; the amphibia by four species of frogs. He also brought a number of specimens of the fish which, according to Humboldt, was sometimes ejected from Cotopaxi, a report which Whymper gives good reason for discrediting. These specimens showed that *Pimelodus cyclopum* had figured under five or six names. His zoological collections, as Mr. H. W. Bates pointed out, have an important bearing on questions relating to the migration of species, and he also brought back sundry objects of ethnological interest.

His journeys among the mountains traversed by the Canadian Pacific Railway enabled him to make additions to scientific knowledge, though these, as he was but rarely on untrodden ground, were necessarily less numerous than in the Ecuadorian visit. But he brought back from the Ice River valley a set of specimens representing a beautiful sodalite rock and its associates, and a more miscellaneous one from several other points of interest, which were

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described by the present writer in the 'Geological Magazine' for 1902 (pp. 199 and 544), together with a collection of Middle Cambrian fossils, chiefly trilobites, from Mount Stephen, of which Dr. H. Woodward has given a full account in the same volume (pp. 502 and 529). Whymper's knowledge of geology and natural history generally, though the pressure of his professional work obliged him to remain among the amateurs, was wide enough to show him what was worth recording or carrying away. This was very noteworthy when he brought back rock specimens from any place of interest. Most climbers collect pretty or curious odds and ends, such as bits of minerals or vein-stones, which help a geologist but little. Whymper always laid hold of what was characteristic and useful, and his remarks upon what he had seen were shrewd and suggestive. Had he been able to devote himself wholly to geology or some other branch of natural history I believe he would have risen to a high position among men of science.

T. G. Bonney.

Sir JOSEPH DALTON HOOKER, O.M., G.C.S.I., F.R.S.

By DOUGLAS W. FRESHFIELD.

By the death on December 10, 1911, at his home at Sunningdale of Sir Joseph Hooker in his ninety-fifth year, the Alpine Club has lost the most distinguished of its Honorary Members and one of the most successful pioneers in practical and scientific mountain exploration. The table of Sir Joseph Hooker's honours, the long list of his publications, will doubtless be published in full elsewhere. Here in the Alpine Club and in these pages, we remember him not so much as the greatest botanist of his generation, as the earliest confidant and friendly critic of Darwin—to whom as his 'affectionate friend' he dedicated his 'Himalayan Journals,'—but as the enthusiastic lover of mountains, the first systematic explorer of the Sikkim Himalaya and the borderlands of Nepal and Tibet, the companion in the Atlas of our late President, John Ball.

In the opportunities as well as in the length of his life, Hooker was fortunate above most men. Born in 1817 at Halesworth in Suffolk, the son of a distinguished botanist, whom he was subsequently to succeed as Director of Kew Gardens, he inherited both his father's tastes and talent. In 1839 he took a medical degree at Glasgow University, and in the next year was appointed nominally as assistant-surgeon, but practically as naturalist, to the Antarctic Expedition of 1839–43, under Sir James Ross. In the course of the voyage Australia and New Zealand, Kerguelen Island, the Falklands and Tierra del Fuego were visited. The botanical results were published in six splendid quarto volumes, in which the young observer found opportunity to put forward 'many novel conclusions

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as to the laws governing the distribution of plants over the earth's surface.'

After some hesitation between the Andes and the Himalaya Hooker in 1847 accepted an official invitation from Lord Auckland and Dr. Falconer to visit India. Sikkim was at that time ground 'untrodden by traveller or naturalist,' and was recommended to Hooker as the most promising field for his explorations and botanical studies. The height of Kangchenjunga had not then been ascertained, and it was the prospect of visiting Chumulari, of which he had read in Turner's 'Travels in Tibet,' that chiefly excited Hooker's interest. In 1848 after some previous travel in the course of which he visited Parasnath, a Holy Mountain, a sort of Monte Generoso, towering above the steamy plains of Bengal, Hooker set out from Darjiling on his Himalayan journey. His 'Journals,' published in two volumes in 1854, have been re-issued in a popular edition, and it would take too long to attempt to sketch his itinerary here. Despite serious political obstacles, Hooker, in company with Dr. Campbell, succeeded in making extensive journeys over the high passes on both flanks of Kangchenjunga, penetrating on the east to the frontier of Tibet, and on the west to Nepalese valleys, none of which were visited again by any European for fifty years. The merits of the 'Journals' have been done justice to recently by another veteran of Himalayan exploration, Lieutenant-Colonel Godwin Austen in sentences I am glad to quote and endorse. 'It is,' he writes, 'for a book of the kind, a pattern to be taken by any writer. It has interested hundreds, made many a naturalist, and exemplifies on every page what a precious gift is that of observation. Here Anglo-Indians had a book dealing with trees and plants, the fauna, the geology, physical geography and ethnology, together with descriptions of the scenery so perfect that not a single character of importance is left out.' Examples of Hooker's powers of description may be found in the pages referring to the Yangma Valley and Chunjerma Pass, while every chapter is enlivened by quaint and entertaining incidents of travel. It may be added that Hooker was one of the first travellers able to recognise an ancient moraine when he met one, and that he consequently threw much new light on the former glaciation of the Eastern Himalaya.

After his return to Europe Hooker visited Chamonix and Zermatt in 1853, and probably on other occasions. In that year he crossed the Old Weissthor, to which he refers in a letter to me as 'a pass of grim memory.' In 1860 he visited Syria and pointed out the obvious, but apparently up to that time unnoticed, fact that the Cedars of Lebanon stand among ancient moraines.

In 1871, in company with John Ball and W. George Shaw, Hooker undertook a more important journey into the Southern Atlas behind Mogador and the recently notorious Agadyr, the result of which was a joint volume, 'The Journal of a Tour in Morocco and the Great Atlas, 1878.' It may be noted that the travellers declared that the

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best hope for Morocco lay in a French occupation. Their mountain ascents were limited by tribal hostility, but they were able on two occasions to gain an elevation of over 11,000 ft., some 2000 ft. below the estimated height of the culminating points of the range.

Hooker held the post of Director of Kew Gardens for twenty years (1865–85) and of President of the Royal Society for five years (1873–78). His greatest scientific works are the 'Flora Indica' and his 'Genera Plantarum,' a complete set of Latin definitions and descriptions of all known genera of flowering plants. One of the most attractive is his volume on 'The Rhododendrons of the Sikkim Himalaya,' which he was the first to introduce into this country.

Regarded as a man of science Hooker stands out by the singular width of his interests. To the too familiar modern type of specialist he was the very opposite. Laborious and pre-eminent in botany he was keenly interested and an acute observer in many other branches of natural research. He studied their mutual relations and their bearings on the great problems of creation and development. It was by this quality of his intellect that he became a stimulative influence on Darwin. To lesser minds he revealed the varied interests, the readiness to impart, the quickness to receive, the sympathy and simplicity of a first-rate intelligence. At the age of eighty-six, despite his years, nothing could exceed his enthusiastic welcome of fresh tidings from the great peaks and glaciers that had impressed themselves so vividly on his imagination. He revelled in Signor Sella's photographs and panoramas. In the glow of his own re-kindled memories he appreciated beyond their deserts the results of my travels with Professor Garwood and S. Sella in his old footsteps. Though conscious of the risk to any credit I may have for modesty, I cannot resist, in conclusion, quoting some sentences from one of Sir Joseph Hooker's letters to me. For they are a striking testimony to the return mountains may make, in after years, to their true lovers :—

'The Camp, Sunningdale,

'*December*, 16, 1903.

'My Dear Freshfield,—I have just concluded my reading "Round Kangchen" with absorption, with pleasure that I cannot express in words. Never since reading, as a boy, Franklin and Richardson's journey to the Polar Sea have I been so fascinated. You have brought to me visions of my happiest early years that I never hoped to see; for your descriptions are as happy as they are truthful; so much so that they have set me dreaming by night of the Teesta, Zemu river, Jongri, and, above all, Jannu. In your mention of my work you have gone far beyond justice, and I thank you heartily for this.

'The sum of work done and light thrown on the structure of Sikkim by your journey is indeed great, and remembering the terrible snowfall surprising. I was not prepared for your being able to hug the great massif so clearly, *i.e.* at such heights, nor for so complete

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a chart of the origin and course of the glaciers. This is really a fine piece of work. The photographs giving the sculpturing and structure of both snow and rocks are of the greatest beauty, and remind me of every detail impressed on my mind when studying the realities. Appendix A has almost upset me. I had no idea that my geological work had any value; no one hitherto had paid any attention to it, and I had myself forgotten it—I may say *utterly*. Mr. Garwood's resurrection of it, and his most liberal appreciation of it is, I need not say, an extraordinary gratification. He has turned it to great purpose in his original views of the origin and building up and sculpturing of Sikkim, and his speculations are of very great interest and promise for the future.

'Again thanking you heartily for your book and for my rejuvenescence, Believe me, sincerely yours,

'JOS. D. HOOKER.'

THE ALPINE CLUB LIBRARY.

THE following additions have been made to the library since September 1911 :—

Club Publications.

Akad. Alpenklub Innsbruck. 18. Jahresbericht 1910–11. 1911
9¼ × 6 : pp. 83.
Contents :—
L. v. Hibler, Ueberschreitung der Meje : Library catalogue : Tours, etc.

Appalachian Mountain Club. Bulletin. Vol. 4, 10 numbers. 1910–1911
7½ × 4¾ : pp. 110.

C.A.F. Travaux en montagne, 1911 : *see* Vallot, H.

—— **VIe Concours international de ski.** Chamonix 3–8 février 1912. 1912
8¼ × 5½ : pp. 10.

—— **Lyon.** Revue alpine. Vol. 17. Rédacteur en chef : Claudius Joublot. 1911
Among other articles this contains :—
E. Fontaine, Aiguille du Géant ou Dent du Géant.
R. Godefroy, Massif de la Collette Verte.
W. A. B. Coolidge, Les grands sommets des alpes de la Tarentaise dans l'histoire.
B. Oglietti, Le Grand Séru.
J. Capedon, A l'Aig. Doran par le face nord
E. Gailliard, Le chaîne du Mont-Blanc avant 1800.
M. Piacenza, Comment fut vaincue la dernière arête du Cervin.
C. Meade, Le face sud-ouest de la Maledia.

—— **Sud-Ouest.** Bulletin. 3me sér. No. 2. Marseille, Juillet, 1911
Contents :—
E. Durègne, La première, par un bordelais, du Mont-Perdu par le Col de l'Astazou, 1861.
Saint-Saud, Aux Dolomites.
L. Briet, Relèves dans le Haut-Aragon.

—— —— Guides et porteurs au 1er juin. 1911.
Folio sheet.

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