very moderate. Below I give you the tariff which Louis Theytaz (the head of the syndicate) sends me:—

20 beds . . .	from 4	francs
Breakfast . . .	1·50	,,
Lunch . . .	4	,,
Dinner . . .	4	,,

ALFRED HOLMES.

'GUIDE TO THE WALKS AND CLIMBS AROUND AROLLA.'—We have received just as we go to press Mr. Walter Larden's 'Guide to Arolla.' Copies may be obtained at the hotels at Arolla, or from Dr. Brushfield, St. Mary's, Scilly Islands, Cornwall, price 2*s.* 9*d.* post free. 'All receipts go to pay actual expenses involved in the printing of the book, and after that will be devoted to charitable purposes in Switzerland, most probably to the relief of the widows and families of guides who have been killed in the exercise of their professional duties as guides (p. vi).' We understand that the note (14) on pp. 104–5 on the central and north peaks of the Dents des Bouquetins was not intended to be printed as it stands: its appearance is due to an unfortunate inadvertence.

REVIEWS AND NOTICES.

The Alps in Nature and History. By W. A. B. Coolidge. With maps, illustrations, and diagrams. Index. (London: Methuen & Co. 1908. 7*s.* 6*d.* net.) Pp. xx, 440.

THIS long-expected and delightful book will be welcomed by all mountaineers. It is impossible for us, with the space at our disposal, to do more than give a brief account of its contents and express our opinion that it will be found as invaluable to students of the history of the Alps as the new edition of 'Ball's Guide' is to climbers and travellers.

The book begins with the question, 'What are the Alps?' The ordinary reader replies, 'The Alps is the name given to the principal mountain range in Europe,' but when the Alpine folk speak of 'the Alps' 'they have in mind the highland summer pastures, that extend along the mountain slopes below the snow line, yet at a considerable height above the village itself.' 'The confusion between these two meanings of 'the Alps' finds an exact parallel in that which prevails in the case of the more general words 'Berg,' 'alpe,' 'montagne,' or 'monte.'

Chapter ii. treats of 'The Pastures of the Alps,' and is full of interesting information—*e.g.* how the men of one valley have got possession of pastures in other valleys. 'We can trace a struggle of this kind (*i.e.* between rival herdsmen) best in the valley of Engelberg, where the Blacken Alp, at the very head of the glen, has never belonged to the monastery, but to Attinghausen, in Uri (opposite Altdorf); while the pastures of the Nieder Surenen Alp,

below, were also secured by the men of the same village after a long-drawn-out contest with the monks, that lasted from 1273 to 1513.' Many similar instances are cited. The whole of this chapter is very interesting.

Chapter iii. treats of 'The Snowy Region of the Alps,' and therein of glaciers and such matters as red snow and avalanches. On p. 28 will be found an account of the extraordinary escape of Christian Bohren from a crevasse on the Upper Grindelwald Glacier on July 7, 1787. Chapter iv. is occupied with 'Alpine Flowers,' by George Yeld, and chapter v. by 'Some Beasts and Birds of the Alps,' by Howard S. Knox, described by Mr. Coolidge as 'two well qualified friends,' a description which we may fully endorse. Chapter vi. is devoted to the Alpine folk, their political allegiance, their mother tongues, and their religion. Chapter vii. contains the 'Political History of the Alps,' and will be found of absorbing interest. The account of how the Swiss failed to hold the Val d'Ossola* while they managed to retain 'Val Leventina or the Ticino valley, down which now thunder the huge engines of the St. Gotthard Railway, and of the districts lying to the south of that val,' will go far to justify our description of this chapter.

On p. 95 the question as to the possessors of the top of Mont Blanc is thus treated: 'As regards the actual summit of Mont Blanc, the French (and their official maps) draw the frontier line slightly to the S. (over the Mont Blanc de Courmayeur) of the culminating point. But the Italians (and their official maps) make the frontier line follow the watershed, and so pass over the actual top and not to its S. Some of the older maps seem to be in favour of the French contention, as well as apparently the map annexed to the report of the Boundary Commission of 1861; but this last map is declared by the Italians to reproduce a mistake of the original Sardinian map, published in 1854, but later corrected. The text of the report favours the Italian contention, stating that the boundary follows the watershed, and so passes over the summit of Mont Blanc.'

We may notice in passing that the highest point of Monte Rosa, the Dufourspitze (15,217 ft.), 'rises W. of the watershed, and so is entirely Swiss (that is, Vallaisan), being thus the loftiest summit of Switzerland, which is not the Mischabel or Dom, as often stated.'

Chapter viii. is devoted to 'The Great Historical Passes of the Alps,' illustrated by seven diagrams. This is, of course, a most important portion of the book. In a cursory examination of it we have found the diagrams of much service, notably in the case of the Mont Genèvre and the St. Gotthard.

More immediately interesting to mountaineers, chapters ix., x., and xi. treat respectively of 'The Exploration of the High Alps up to the End of 1865,' 'Modern Mountaineering in the High Alps,' and 'Alpine Guides.'

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* Pp. 99, 100-1.

Chapter ix. carries the exploration of the High Alps up to 1865, the year in which the conquest of the Matterhorn was followed by the terrible accident to four of its conquerors. Of this accident the writer says, 'It was the most dramatic event in a most dramatic year, and the cause of mountaineering seemed to be lost for ever, so deep and lasting was the impression made by this terrible event.'

'Modern Mountaineering in the High Alps' fills chapter x. This is a chapter to be read carefully by all climbers. In this chapter the author deals with guideless climbing, which he considers to be 'the great shadow and blot on present-day mountaineering.' But the reader will be careful to observe that the author does not condemn guideless climbing by really competent climbers. We quote his words (p. 248): 'Notice that we do not condemn guideless mountaineering in itself, but only when it is practised in the High Alps (that is, roughly, above the snow line, or, in the case of difficult ascents, without regard to the height of the peak) by incompetent persons (not by those, always a select number, who, with companions of the same stamp, are entitled to undertake first-class expeditions). It is quite true, and sadly true, that first-rate amateur climbers have perished in the Alps, for there, as in the case of hunting, yachting, and shooting, dangers exist which cannot be avoided if the circumstances are favourable for them, while a mishap, an "accident" in the strict sense of the term, is always possible. Even the best athlete may break his neck by falling downstairs, or slipping on a pavement, or be run over by a railway train.' The author explains very clearly how the unhappy extension of guideless climbing has come about, in p. 248 foll., which we commend earnestly to the attention of all who are beginners in Alpine pursuits.

In view of the unhappy necessity under which this 'Journal' has so often lain of calling attention to the increase of Alpine fatalities, wrongly called accidents, owing to the increasing neglect of reasonable and well-known precautions, we are glad to find the subject so thoroughly threshed out as it is in this chapter; and as illustrating the absolutely reckless way in which difficult climbs are undertaken by incompetent persons we extract the following passage (pp. 255–6):—

'Few English readers, save those who devote special attention to Alpine matters, have any idea to what extremes the pursuit of guideless climbing has actually been carried in the Alps. A few examples, all dating from the last few years, may help to open their eyes. In 1903 a party of eight young men set out from Geneva (bearing with them, it is said, a ham and several loaves of bread as provisions) to ascend Mont Blanc. They seem to have been insufficiently equipped, and to have had little or no experience in climbing. By a sort of miracle seven of them, though after very many hours' toil, really did attain the hut on the Aiguille du Goûter. But a great storm came upon them; they were struck

by lightning, and were only rescued, alive, though wounded, several having remained senseless for hours, by the heroic efforts of a party of guides. The storm was really a mere unfortunate detail, for the party were in no wise fitted for the climb even in the finest weather. In 1905 two young Swiss tradesmen (one holding the "diploma" of the Swiss Alpine Club as amateur guide, having gained it, so it is said, with great distinction) attempted the Jungfrau from the Wengern Alp. They both perished on the way, how exactly is not known, as only one body was found. A few days before the same really difficult climb had been tried by two young apprentices (one a blacksmith, the other a joiner) resident in Grindelwald. Both perished, another proof, if one was wanted, that mere bodily strength and vigour are not sufficient equipment for a high mountain ascent. In the autumn of 1906 it was discovered that nothing had been heard of two young Germans who, alone, had started for the ascent of the Jungfrau from the Roththal two months before. A strong search party from Lauterbrunnen was organised, which could discover no trace of the two travellers, but did discover, very high up, the body of a man, who turned out to be a baker from Beckenried, who had attempted this expedition alone, armed with an alpenstock.'

We have not space to quote more; our readers should turn to p. 256 for an even more amazing example of foolhardiness, and for the moral which our author draws from these examples.

Chapter xi., 'Alpine Guides,' is illuminating as well as historically interesting, for in it we get the story of how the guide that is to be spends his boyhood, *e.g.* p. 267: 'Now there are few forms of training more effectual and useful for a future guide than bringing down logs of wood on a big sledge in winter. It is a very great strain on the legs; it requires considerable nerve and dexterity, so that bodily strength is by no means all that is required; it involves danger of death or mutilation if the sledge is allowed to gain too great momentum, and so pass over the body of the man sitting in front of it. Every winter there are accidents arising from some mistake as to managing these heavy sledges. Thus a lad must have some presence of mind and be ready to alter his tactics as the heavy weight behind him sways from side to side or threatens to overwhelm him.'

We wish that we could give our readers the whole of chapter xx., 'A Year's Round in the Alps.' It contains a delightful treatment of a most interesting subject.

Chapter xiii. is devoted to 'The Various Divisions and Groups of the Alps.'

There are three appendices: i. List of the Principal Peaks and Passes in the Alps; ii. Select List of the Principal Peaks in the Alps, arranged according to the date at which they were first conquered; iii. List of the Principal Works relating to the Alps.

We must not forget to add that the book is furnished with an excellent index.

The twenty illustrations are for the most part reproductions after photographs by Signor Vittorio Sella, though Mr. Alfred Holmes, M. Victor de Cessole, and S. Guido Rey have also assisted the author in this respect. An exhaustive account of the illustrations will be found on pp. xiii–xx. The Märjelensee, Mont Blanc from the ridge of the Mont Herbetet, the Matterhorn from the Col des Grandes Murailles, the Meije from the South strike us as among the best; but they are all good and well chosen. The diagrams showing the chief historical passes of the Alps will be found a great help to the understanding of their history—one of the chief and most interesting topics of which the author treats. At the end of the book will be found a general map of the Alps, prepared by the skilful hand of Mr. Bartholomew, 'designed to afford a bird's-eye view of the Alpine chain, with its principal peaks, passes, and glaciers, the main idea being to mark the way in which the mountains rise gradually out of the plains till they culminate in lofty snow-clad summits.'

Rock-climbing in Skye. By Ashley P. Abraham. Longmans, Green & Co. London: 1905.

This book is to be considered as a companion volume to the two already published by the Messrs. Abrahams, 'Rock-climbing in the English Lake District,' and 'Rock-climbing in North Wales.' As in these volumes, the illustrations have been made the chief features of the work, and those who have learned what to expect from the Messrs. Abrahams will not be disappointed with the photographs in this book. These are all extremely good, and if, in some, artistic possibilities appear to have been subordinated to the necessities of climbing illustrations, that has been understood in the plan of the work.

To a photographer the simply stated fact that the photographs were all taken on whole-plate-size glass plates conveys a world of meaning. If, as has been stated, genius consists in taking infinite pains, we can hardly deny its possession to the illustrator of this volume.

In some cases we think the method of reproduction employed hardly does justice to the beauty of the negatives. There is in some a tendency to an unpleasing 'soot and whitewash' effect.

Mr. Abraham is fortunate in possessing friends self-sacrificing enough to assist him in some of the carrying a whole-plate camera involves among the screes and on the crags of Skye, but in the actual obtaining of the photographs this must usually have been done alone and unroped, from exigencies of space. An incident (on p. 119), while the photograph of the '80-foot pitch' in the 'Waterpipe Gully' was being taken, vividly shows the risks attached to the photographic art in connection with the illustration of rock-climbs. In trying to recover the camera which a gust of wind had upset, the author succeeded in grasping the camera, but in the

effort lost his balance and fell over the cliff. Fortunately he had tied himself to a spike of rock and was brought up by the rope, escaping with a few bruises and slight shock.

With regard to the literary part of the work, there is, of course, a tendency to a certain monotony in descriptions of gully and face-climbs. Mr. Abraham has been wonderfully successful in avoiding this monotony, and this without recourse to devices which in the volume on Wales somewhat overstepped the bounds of good taste.

At the end of the volume is a chapter on historical and personal matters, in which a brief summary is given of the chief writers on, and pioneers in, climbing the 'Rocky Mountains of Skye,' to use the descriptive phrase of one of the former presidents of the Alpine Club.

Naturally these climbing pioneers have been nearly all members of the Alpine Club, or later, of the Scottish Mountaineering Club, often of both. The original climbing book of the climbing centre, Sligachan Hotel, with its manuscript notes, is now in the possession of the Scottish Mountaineering Club, but that club has had the book typed, and has presented it to the new proprietors of the hotel for the use of climbers visiting the island.

Last September the climbing history of Skye was very fully dealt with in the autumn number of the 'Scottish Mountaineering Club Journal,' the number running to no less than 79 pages, but, issued at a phenomenally low price, the whole edition was quickly exhausted, and is now out of print—evidence of the great and growing popularity of Skye as a climbing centre.

Coming to Skye so late as he did, Mr. Abraham naturally only knew the island after all the peaks, 'inaccessible' or otherwise, had been climbed, and all the crooked routes on the arêtes 'straightened' out.'

He and his climbing companions have, however, succeeded in discovering a number of new climbs and variations on old routes, and these he describes with great accuracy and detail.

As in the companion volumes a graduated list of 'courses' is annexed. These appear to be drawn up with judgment and discretion, and if young climbers would only realise the strength and experience of the parties who have made the 'exceptional courses,' we should hear less of disasters such as are rapidly giving to Lakeland and Wales a bad reputation.

Mr. Abraham writes all through with a keen appreciation of the mystery and charm of the Coolins in sunshine and storm, in daylight, and above all in dark, and his book can be thoroughly recommended to mountain-lovers whether they have knowledge of the Isle of Mist or not.

A Sketch of the Geography and Geology of the Himalaya Mountains and Tibet. By Colonel S. G. Burrard, F.R.S., and H. H. Hayden. Parts I.–III. Calcutta: 1907. Maps, Profiles, and Illustrations. Sold at the Trigonometrical Office, Dehra Dun.

THE reports here under notice are a summary of the geographical and geological information available at the present time with regard to the great ranges which protect India on the north. In May 1906 a suggestion was laid before the Indian Government by its Survey Department that such a compilation would be opportune and serviceable. The ground given for this belief was 'the increase in the number of travellers in the Himalaya and Tibet and the wide interest evinced by the public in the geography of these regions.' The authorities at Calcutta had not at that date been constrained to disregard the interests of travellers and the scientific public by closing the gates of Tibet! They readily assented to the proposal and entrusted its execution to Colonel Burrard, F.R.S., and Mr. H. H. Hayden, Superintendents of the Trigonometrical and Geological Surveys.

Geographers and mountaineers must acknowledge with gratitude so real and effective an endeavour on the part of Government Departments to promote the advance of exploration and knowledge by collecting and arranging local facts and figures and suggesting their possible bearing on scientific theories. The main object of the writers has been to give, as it were, a panoramic sketch of the mountain barriers of India. But in doing so they have touched on more than one cartographic and geodetic problem of universal interest. It may be convenient to deal with these before noticing the more strictly Himalayan portion of these reports.

The admirable remarks of Colonel Burrard on cartographic methods and the qualifications needed for their proper use deserve wide circulation. We propose to quote an extract from them. It may be read with particular satisfaction in the Alpine Club, some members of which can recollect the time when almost identical suggestions were resented in official quarters, both at home and in India, as the unpractical propositions of aggressive amateurs.*

Colonel Burrard writes: 'The generalisations (of mountains on small-scale maps) have been carried out by draftsmen who were unaware of the scientific problems involved, and they are nothing more than conventions.

'A draftsman can no more draw mountains without a knowledge of their structure than a landscape artist can draw a village scene without perspective, or than a figure painter can draw men and animals without studying their anatomy. If we attempt to cover many square yards of paper with hill-shading without having a knowledge of the governing lines of structure, we only succeed in presenting a chaotic mass of incoherent details.

* See *Alpine Journal*, vol. xii. p. 55.

'Ruskin says it is wrong to draw what we do not see. No one will oppose Ruskin's maxim, but the difficulty in mountains is *to see*, and long experience is necessary to give the power of doing so. The untrained eye will see details readily enough, but it will miss the governing lines. In small-scale representations we require the governing lines, not the details.

'On almost all maps the water-partings are made the most conspicuous ranges: draftsmen see two streams and create a ridge between them; we thus have ridges running in all directions, the more important the water-parting the darker the ridge. This system has rendered small maps useless for scientific investigation. There will be no progress in Himalayan mapping until the water-parting ridges are subordinated to the ranges of original elevation. The lines of water-parting, though emphasised on maps, have rarely any structural importance, and have but little interest for the geographer or geologist. What, for example, can be more misleading than to show Mount Everest rising from a southern spur of a Tibetan range, because the latter happens to be a water-parting? Yet this was done on the map illustrating the "Imperial Gazetteer of India."

'On a map a river is a sharp line that admits of no modification, a range is indefinite and can be squeezed at will. On all maps the draftsmen begin by drawing as many rivers as the scale allows, and they adjust the hills afterwards to the rivers.

'In Nature the mountains determine the directions of rivers; in maps the rivers determine the directions of mountains.'

It is a singular coincidence that the map chosen to illustrate these remarks represents the portion of the chain the larger scale survey of which was more than twenty years ago criticised in these pages.

We are next reminded that in the 'adopted values' for height some uncertainty must exist. Three causes are assigned for this uncertainty. The first we believe to be relatively unimportant. It is true that the actual height of some peaks may be affected by an increase or decrease in their snow-cap. But snow does not accumulate indefinitely, even where it does not fall off in avalanches. The snow on the very top of Mont Blanc slides downwards, as was proved by the movement of M. Jansen's Observatory. An allowance of 50 ft. would probably more than cover any possible variation from this cause.

Far more serious are the sources of error which affect the calculations themselves; chief of these is the refraction in distant views from the plains. 'It makes the peak appear too high. Refraction is greatest in the morning and the evening, and least in the middle of the day; it is different in summer from what it is in winter. If we observe Dhaulagiri from the plains of Gorakhpur it appears to fall 500 ft. between sunrise and the afternoon, and to rise again 300 ft. before sunset. Even in the afternoon, when it appears lowest, it will be too high by perhaps 700 ft.'

Another, but minor, source of error is the deviation of gravity.

It is proved by tables that the heights assigned to Mount Everest and Kinchinjunga are both too low—the former by at least 140 ft., or probably 200 ft. But Colonel Burrard deprecates frequent minute alterations in assigned altitudes, and suggests that revision should be carried out systematically and only at definite periods.

We now turn to the broader features of mountain structure here described. The main point emphasised had long ago been dealt with by Sir Clements Markham. The great peaks of the Himalaya do not rise, as Sir J. Hooker once thought, and many maps still suggest, on the southern spurs of an interior chain. They are found on, or in close proximity to, the main axis of elevation of the mountain ranges that gird India on the north. This axis is a distinct, but not a continuous range; it does not serve as a continental water-parting. It is broken by broad and deep chasms, through which flow the waters collected in the parallel troughs lying between it and the relatively inconspicuous ridge of the water-parting. On p. 88 of the Report a table is given showing the length of the crest-zone carrying peaks of over 24,000 ft.; this is less than one-tenth of the entire length of the range. A better idea of the relation between the range and its gaps might have been given by showing the lengths in which the summits fail to reach the snow level—or say 18,000 ft.*

Whether in the Alps, the Caucasus, or the Himalaya, we find this remarkable feature, that the rocks of the geological axis are cleft by deep river beds. Geologists allege various causes for this phenomenon.† Professor Bonney imagines that the streams from ancient water-partings have acted as saws on younger ranges, so slowly up-thrust as to give the water time to do the work called for, to cut a way through, perhaps, 12,000 ft. of granite. Others think that the streams have cut back at their heads, as the Maira has at the Maloja, and in many instances this is doubtless the case.

Certain facts here reported may seem to confirm an earlier theory. Assume that the ridges and furrows of a mountain system are primarily produced by the gradual contraction of the earth's surface, would not the forces exercised have produced both pressure and strain; might not transverse cracks have resulted as well as wrinkles at the points of highest tension? In the Himalaya, we are here told, the highest peaks of the principal groups are found close to the deepest river troughs; while the loftier peaks of parallel ranges are found on about the same transverse lines. The gaps occur, therefore, about the points of greatest strain and pressure.

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* Sir J. Hooker is quoted as giving the snow level on the S. slope of Kinchinjunga as 14,700 ft. This is too low by at least 1,300 ft. for that locality. Elsewhere it is much higher.

† See *Geographical Journal*, vol. xxx. No. 5, November 1907, for an article by Mr. R. D. Oldham on 'The Valleys of the Himalaya.'

Again, not a few of the streams which traverse gaps in the central zone prove unequal to piercing the softer rock of the lower parallel ridge to the south. Further, Colonel Burrard points out that the three troughs of the Salween, Mekong, and Blue River, lying all three within a space of 50 miles, are hard to account for except as 'features of original structure.' Had they been the result of erosion, he would rather have looked for a single breach in the mountain walls.

These are local facts, which may furnish arguments for those who believe that the great gaps in the Himalayan axis, however much they may have been extended and deepened by erosion, are primarily features of original structure. This hypothesis receives some incidental support from Lord Avebury's experiments on the result of pressure on stiffly plastic surfaces (see 'Quarterly Geological Journal,' vols. lix. and lxi.), and it is further illustrated by observations recorded in a note in the March number of the 'Geographical Journal,' dealing with the effects of pressure from a railway embankment on the adjacent soil.

But we must not venture here on a dissertation on the genesis of mountain ranges. It is time to turn to the orographical details which form the substance of the Reports. The first part deals with 'The High Peaks of Asia,' perhaps more exactly of the Himalayan and Trans-Himalayan Ranges; the second with 'The Principal Mountain Ranges of Asia'; and the third with 'The Rivers of the Himalaya and Tibet'; a fourth, on the 'Geology of the Himalaya,' has not yet been issued.

Colonel Burrard points out that few summits are strictly peaks; that the majority are rather combs or knobs rising out of prolonged ridges. This is a fact familiar to all who have seen a summit-view, or have studied such panoramas as that of the Caucasus taken by Signor Sella from Elbruz.* But we confess to resenting the description of Jannu (or Jano) as 'a mere projection on a buttress.' Definitions are proverbially difficult; but surely a summit that is precipitous on all sides for thousands of feet is a real peak.

The Himalayan summits are here divided into five magnitudes: those over 28,000 ft., *three*; those over 27,000 ft., *two* (the second being the lower top of Kinchinjunga, which is only a separate peak in the sense that the Nord End of Monte Rosa may claim that title); those over 26,000 ft., *eleven*; those over 25,000 ft., *thirty-two*; those over 24,000 ft., *twenty-seven*. The attempt suggested to calculate the number of peaks of a certain altitude in a group from the number of peaks of other altitudes, seems hardly likely to lead to any certain and satisfactory results. It might not be difficult to test the method in the Alpine region.

* It was noted so long ago as 1768 in the Preface to vol. ii. of Haller' *Historia Stirpium Indigenarum Helveticæ*: 'Alpes etsi eminus pyramides videntur, longe undique a vicinis montibus separatæ, vera tamen dorsa sunt, quorum pars aliqua passim altius in aerem surgit.'

The movements of Himalayan glaciers are only incidentally referred to, the subject having been recently dealt with in a special report.* But a cordial invitation is given to travellers to assist the Geological Survey in the task of measuring the advances and retreats of the ice, and thus furnishing fresh material for the International Commission which is engaged in collecting facts from every quarter of the globe with a view to tracing the connection of these ice movements with variations in rainfall and climate.

It might, perhaps, have been well to state somewhat more fully the objects of the inquiry into glacial oscillations and the progress it has made in Europe, and to bring out the fact, often lost sight of, that the movement of each glacier will not correspond in date with its climatic cause but will follow it at an interval determined by its rate of movement and its length, while the rate of movement will be mainly regulated by the bulk of the frozen mass and the inclination of its bed. For example: the movements of the Bossons Glacier anticipate those of the Mer de Glace.

On one or two points of detail we would add a few lines of comment.

It is extremely difficult to see how a glacier can cut back into the head of its basin. Exposed cliffs may suffer from subaerial denudation, but the névé protects what lies under it. We are aware that it has been suggested that blocks of rock falling into a bergschrund may reach its bottom and, carried on by the frozen material, may grind the floor on which the latter rests. But such action, even if proved, would serve to deepen rather than to lengthen the glacier's basin. Again, the discolouration of Himalayan glaciers is not due to any great extent to dust carried by the winds. Were this so the upper névés would also be discoloured. It is caused by the rapid disintegration of the cliffs that overhang them, and the dirtiness of each glacier varies with the character of its channel, those lying between precipitous rocks (*e.g.* the Jannu Glacier) being the dirtiest.

We do not propose to reopen the 'Mount Everest' controversy. But, assuming the suggestion made in the Report, that Devadhunga (the abode of Deity) 'may possibly be a mythological term applied to the whole snowy range by natives of a certain part of Nepal' to be correct, it would clearly have been consistent with Alpine practice to apply it to the highest point of that range. Monte Rosa (the Glacier Mountain) is named from a Pass—now the St. Théodul—many miles off, and so is Piz Bernina. But we are prepared to acquiesce in Colonel Burrard's conclusion, 'Personal names for geographical features are doubtless objectionable, but we must accept accomplished facts.' The controversy has, we hold, served its purpose in putting a check on an 'objectionable' practice.

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* *Records of the Geological Survey of India*, vol. xxxv. Parts 3 and 4, 1904. London: Kegan Paul, Trench & Co.

It is probable that the rock peak behind Mount Everest, photographed by Signor Sella, may be identified with the peak here referred to as T. 45, the sixth peak of the Himalaya, 26,867 ft. This height is the result of observations from three stations. The peak called 'Kambachen' (really the name of a district), 25,782 ft., is the most western summit of Kinchinjunga.

We must note that the Survey has decided to return to the spelling Kinchinjunga and to substitute Jano for Jannu. We trust these are final changes.

The Report contains two charming full-page illustrations from drawings by Colonel Strahan. A dozen photographs of typical subjects would have added more to its scientific value. It is also furnished with many valuable maps, diagrams, and panoramic outlines. The latter would be still more instructive had some detail besides the sky-line been given, and that might have been shown with greater sharpness. Nearer and more distant ranges cannot be distinguished. Mr. Tuckett's outlines in old numbers of this 'Journal' are examples of a method we prefer.

We note that on one of the outlines (chart vi.) the second peak of Kabru is assigned the height of a lower buttress on the west of the double summit and much lower (21,970 ft.), and that Siniolchum is omitted.

Club Alpino Italiano: Guida dei Monti d' Italia. Giovanni Bobba, 'Alpi Marittime.' Pubblicazione della Sezione di Torino sotto gli auspizi della Sede Centrale. 1908. Pp. xxxi and 416.

THIS little book will be welcomed by all visitors to the Maritime Alps. It is well printed on thin paper, so that it weighs very little, and is well furnished with excellent maps, sketches of individual mountains (from photographs), and panoramas. It has a list of guides and porters as well as a full tariff. In short, with this excellent book and the Alpine Club Edition of Ball's 'Western Alps,' it should now be easy to plan a tour in this, in its own way, fascinating district, which has been too much neglected by our fellow-countrymen. Those who have to time their visit to the Alps in June and early July will do well to consider the claims of the Maritime Alps. We heartily congratulate Signor Bobba and the Italian Alpine Club on the appearance of this volume, as we did on the publication of its predecessor, the excellent 'Guida delle Alpi Occidentali,' by SS. A. Martelli, G. Bobba, and L. Vaccarone, on which this work is founded.

PROCEEDINGS OF THE ALPINE CLUB.

A GENERAL MEETING of the Club was held in the Hall on Tuesday evening, May 5, 1908, Mr. Hermann Woolley, *President*, in the chair.

The PRESIDENT said: Since we last met, Mr. Francis Vaughan Hawkins has died, at the age of seventy-four. He was the sole survivor of the meeting at Ashley's Hotel when the Alpine Club was finally constituted. His best known expedition was the