

THE MEIJE.—M. Duhamel has kindly pointed out a slip in the narrative of his attempt on the Meije in the third 'Annuaire' of the Club Alpin Français, which I have reproduced in my article on the Meije in the February number. The height of his cairn, according to his calculations, is 3,480 mètres, and not 3,580. This correction should be made at p. 125, line 10; p. 126, n. †; and p. 136, line 4 from bottom, of my article.—W. A. B. COOLIDGE.

## ALPINE NOTES.

GLACIERS AND METEOROLOGY.—The following note was addressed last autumn to Mr. R. Scott of the English Meteorological Office, by Dr. Hann of Vienna:—'It is very difficult to account satisfactorily for the retreat of the glaciers, and in fact this has not yet been done. No help is afforded by observations of the quantity of the rainfall or of the temperature of the air, at least from the point of view from which these have hitherto been considered. It is possible that it may be necessary to compare, not the annual mean, but the *mean at different seasons of the year*, in search of a variation, which may be connected with the great retreat of the glaciers. It is much to be desired that meteorologists should pay greater attention to this phenomenon than they have hitherto done, as it seems to me that the periodical variations in the volume of glaciers may indicate more precisely (*or—*are a more sensitive indicator of) changes in climate than the observations (? of quantity of rainfall) made at our meteorological stations. We have here no doubt the aggregate result of many causes, but this is an advantage, even though it may increase the difficulty of tracing out separately the operation of each cause. I think it would be a good thing to suggest at the next Congress, that all the known facts relating to the retreat of the glaciers should be brought together, or at least that a digest should be made of the literature of the subject, which is very scattered, and scarcely within the reach of professional meteorologists. This would be a fitting task for the different Alpine Clubs which, at least the German Club, devote themselves in some degree to the advancement of science. If we could arrive at as complete a knowledge of the facts as possible, we could then ascertain how far they can be accounted for by our meteorological observations. I believe most sincerely that it would be well worth while to encourage such investigations, and ask for your support in promoting this object.

'DR. J. HANN.'

R. H. Scott, Esq., Meteorological  
Office, London.

Mr. Scott has sent circulars to the foreign Alpine Clubs, calling their attention to the subject, and at the second Meteorological Congress, held at Rome this year, a resolution was passed in the following terms:—

'Le Congrès attire l'attention des Météorologistes sur l'importance de mesurer les variations dans la longueur et l'épaisseur des glaciers

dans les différents pays, afin de pouvoir en déduire les relations qui existent entre ces variations et celles des éléments météorologiques.'

The following letters have been written by members of our club to whom reference was made on the subject.

10 Southwell Gardens, South Kensington,  
March 30, 1878.

'MY DEAR SIR,—Dr. Hann's letter refers to a subject in which I take much interest, and to which I have for some time past felt inclined to apply myself as soon as I am clear of some pressing work.

'The discussion naturally divides itself into two branches. The variations in the dimensions of the glaciers of the Alps, which as far as we know seem to be distributed in cycles of long period, involving a large amount of change, and other cycles of shorter period, and corresponding to lesser changes of volume, must of course ultimately be referred to physical causes of a general nature external to the earth's surface, and the investigation of these forms the main business of meteorology as a branch of physics. But the correlation of the particular facts of glacier oscillation with those which are or may be disclosed by meteorological observations is a more limited inquiry, and one which I think might, even with existing materials, be undertaken with some measure of success, though I am not aware that it has been seriously attempted. The question whether in a given year, the volume of a glacier shall increase or diminish resolves itself into a comparison between the amount of addition to its volume by the annual fall of snow or hail within the glacier basin, and the annual amount of ablation. It is of course obvious that annual, or even monthly mean temperatures throw no light whatever on the inquiry, and that to form reasonable estimates under both heads, nothing short of a careful examination of the daily records made in suitable stations can be of any use. Not having yet attacked the subject, I merely hazard the opinion that for some years past, the number of such stations has been sufficient to give some promise of useful results.

'My chief doubt is, whether the observations hitherto made at high stations in the Alps will be found to throw as much light as is desirable on the subject of ablation. A chief element in this is the direct action of solar radiation which operates to a very sensible extent at all seasons, and which would be found to correspond much more nearly with the records of a black-bulb thermometer in the sun, than with those of a thermometer in the shade,—but quite as important a factor in ablation is one to which I long ago called attention, but which has been very little noticed by writers on glaciers, and that is the effect of rain falling in the higher region, especially when, as sometimes happens, its temperature is considerably above 0°C. This is often shown by the sudden and rapid increase in the volume of glacier streams out of all proportion to the actual rainfall. At first sight it might seem as if the additional volume of water reaching the glacier stream—which is the measure of the ablation—could be no more than that due to plunging ice at melting point into the volume of water representing the rainfall on the glacier basin at the temperature of the latter, but there is a further,

not inconsiderable, amount due to the mechanical effect of the rivulets of comparatively warm water on the glacier surface, which brings down a considerable quantity of glacier ice in a condition of *sludge* from a higher position, where the ordinary ablation is less, to a lower one, where this is greater.

‘There are several other points connected with the inquiry at which, for lack of time, I can merely glance. Such is the prodigious difference in the amount of ablation occurring between a state of the weather when the sky is clear at night and cloudy by day, and that when cloudy at night and clear by day, although the difference between the records of the thermometer in the shade may be inconsiderable.

‘Finally it may be found that one of the chief elements in the shrinking of the glaciers of late years, is due to a diminished snowfall in winter, along with an increase in the late spring. This operates in various ways (sufficiently obvious) to increase ablation, and diminish additions to the volume of the glacier.

‘I have several times tried to make brief and casual observations on the variations occurring in the volume of glacier torrents. There are many difficulties, and at the best such casual observations can be of little use,—but there are many stations in the Alps, such as Zermatt, Chamouni, Moril, Rhonegletscher, Grindelwald, &c., where, with a moderate amount of intelligent trouble, such observations could be systematically recorded, and thus secure the most important datum in the inquiry, for the drainage *plus* the amount of evaporation from the glacier surface, and *minus* that due to rain or snow falling below the level of *névé* and speedily melted, exactly corresponds with the ablation. Besides this, it could without extra labour be connected with observations on the amount of glacial mud, brought down by glaciers—a most important point in connection with the geological results of glacial action, as to which no adequate observations exist.

‘A much less important, but yet a useful, addition to the records kept at existing stations, would be an entry of the temperature of the rain falling, when this is sufficient in volume to differ sensibly from that of the atmosphere. If you can promote these objects, especially the former, you will, I am sure, greatly assist the progress of Alpine Meteorology. Believe me, &c.

JOHN BALL.’

Robert H. Scott, Esq., F.R.S.

5 Sussex Place, Hyde Park, March 1, 1879.

‘MY DEAR FRESHFIELD.—The subject which Dr. Hann has recommended to the attention of Alpine Clubs is one of great interest, but also of considerable complexity.

‘Among the various conditions of the problem, it is comparatively easy to see which influences tend in the general direction of glacier extension, and which in that of glacier contraction. But even with respect to the general tendency of certain conditions, there appears to be more uncertainty than might be supposed. It has been suggested that the great extension of glaciers, which is known to have once prevailed, may have been due not to lower temperatures than now exist, but to a greater amount of condensation. This, however, implying

more rainfall as well as more snow, might not improbably produce precisely the opposite result.

‘And the relative efficacy of the several influences, temperature, atmospheric or solar, snow or rainfall, and the seasons at which they occur, are points upon which plausible conjectures may be formed, but the materials for a definite opinion are so imperfect that no satisfactory conclusion can be arrived at.

‘How far then can members of Alpine Clubs assist in collecting such materials? In the first place careful and continuous meteorological observations are required, and as remarked by Dr. Hann and Mr. Ball, mean temperatures alone can throw little light on the question. The importance of observations of solar radiation has been pointed out, but to give these a definite value they should include a careful note of the duration as well as the intensity of the action. With regard to atmospheric temperature, daily observations are absolutely required, and it seems to me that the important element is not the mean temperature for the 24 hours, but for those hours during which it exceeds 0°C., and the number of those hours. The amount of snow or rainfall and the temperature of the latter are of course important factors.

‘But towards the collection of these data, which must be systematic and long continued to have any value, those members of Alpine Clubs whose usual residence is at a distance from the mountains can contribute but little. And even the measurement of the volume of glacier streams, suggested by Mr. Ball, would require to be made at short intervals and for long periods of successive years, before any definite conclusion could be based upon them.

‘But as I understand the suggestion of Dr. Hann, it is rather that our members should direct their attention to recording the actual changes in the condition of the glaciers which express, as he says, the integration of the meteorological facts. And this I think they might very usefully do. Careful measurements might be made of the form and position of the extremities of the glaciers, but it would be less difficult and still better to take sections across the surface of glaciers at different parts of their course, in positions which could be easily identified. These sections should be referred to bench-marks on some neighbouring rock, and if possible connected with the levels of the government surveys.

‘The comparison of such sections, both at different periods in the same year, and also from year to year would afford the most definite information as to the actual increase or diminution of the glaciers; and the most useful sections would be those taken in the most accessible situations, just above the final ice-falls, as, for example, opposite the Montanvert, which would indicate, more certainly than even a survey of the extremity of the glacier, the general result of its progression and ablation.

‘The instruments used need not be such as materially to encumber the mountaineer, as minute accuracy would not be necessary. Yours very truly,

‘R. C. NICHOLS.’

D. W. Freshfield, Esq.

‘DEAR MR. SCOTT.—I have no doubt that the chief cause of the

retreat of the glaciers throughout the Alps has been the comparative snowlessness of modern winters, in other words the deficient supply. I have had constant letters from a Chamonix guide of late years, and their uniform strain has been the little snow and consequent possibility of fieldwork in the winter months.

'The exceptions to the general movement of the ice at Zermatt and in the Engadine are doubtless to be accounted for by the snow supply having been in those districts less deficient. Each ice-stream should be studied separately. For instance, at Zermatt we may find the Gorner Glacier advancing, while the Findelen Glacier is in retreat. The first thing a careless observer will say is, 'Most mysterious! since they both come from the same névé.' But examination shows that though this is true as to half the Gorner supply, the larger half, perhaps, comes from a high plateau exposed to all the snowfall brought up by the S.W. wind, from which the Monte Rosa range shelters the lower névé which feeds both Gorner and Findelen.

'Meteorologists, it seems to me, must in the first place ascertain the kind of seasons which control the movements of the ice. They will then be able to use the records of glaciers to some extent as clock-hands, indicating what the seasons were in past times. They must bear in mind of course that it will take a year or more for the bottom to respond to the supply poured in at the top, and that the periods of greatest advance will follow not coincide with those of greatest supply.

'On one point I think the public mind ought to be disabused. The stories of the extraordinary smallness of the glaciers in the Middle Ages, 1300-1500 A.D., of babies crossing the Mönchjoch, etc., must be abandoned along with the Tell legend. Venetz's proofs (quoted *Alp. J.*, vol. vi. p. 30) prove no more than such an advance as took place at the beginning of the present century. There has been, I believe, no great change in the extent of the ice, and consequently no serious deterioration of the Swiss climate since history began. In Roman times the ice must have been pretty much where it is now. Had it been much lower, such a pass as the Great St. Bernard could not have been used as a highway. There have been, I believe, a series of oscillations confined within roughly speaking the same limits. From 1560-1600 there was one of the greatest advances; and during this time so severe were the winters that the Lake of Constance was three times frozen over.

'The following facts and references may be worth adding. The mountaineers who were on the Alps last winter found it comparatively warm (sometimes above freezing point) between 10,000 and 13,000 feet. A warm southerly wind swept about the great peaks, while the lowlands were nipped by a black frost and shrouded in frozen mists.

'The Italian Alpine Club have founded a series of meteorological stations at heights from 9,000 ft. downwards all along the southern side of the Alps, the observations at which are regularly published.

'In Petermann's "Mittheilungen" for October 1878, there is a long article by Prof. Fritz, on the periodical movements of glaciers, in which the statistics attainable seem to have been carefully collected. The Professor attempts to prove that sunspots are responsible for the movements of glaciers, as well as for our commercial crises.

‘There is also an article on Caucasian glaciers in the last number of the German Alpine Club’s publication. They are in retreat, but not such a rapid retreat as that of the Alpine glaciers.

‘In a very rare book by a Mons. Bordier, “Voyage Pittoresque aux Glacières de Savoye” (Geneva, 1773), there is a passage which curiously anticipates Dr. Hann’s suggestion, and another which illustrates my views as to the oscillations of the ice.

‘Something may be done in the direction suggested by individual members of our Club. But it is to the foreign Clubs who are on the spot, and with large funds, that you must look in the first place.

‘DOUGLAS W. FRESHFIELD.’

ALPINE PICTURES IN 1879.—On the whole, the impression left by the pictures of Alpine scenery shown this year in exhibitions, or at the painters’ studios is satisfactory. No new genius has appeared, but such progress as there is is in the right direction. There are welcome signs that the doctrine of the old school of mountain painters is almost obsolete, that we are no longer to be asked to believe that mountains must be altered into something impossible in nature before they can be presented on canvass. The new school seem to agree that though they may omit, they will not wilfully distort or falsify.

So long as they adhere to this principle they will secure one great advantage. When there is nothing to confuse and derange them, our recollections come at once to the painter’s aid. He may not have been able to give us all there was to see, but if he gives us *nothing but what he saw* memory supplies his omissions; while, at the least touch of falseness to local truth she flies altogether.

We shall briefly note the year’s work of our artistic members.

In the Royal Academy Sir Robert Collier’s ‘Matterhorn from Zermatt’ occupied a conspicuous place. It is a large work boldly conceived and most conscientiously worked out. The peak has never been painted with such firm and delicate precision. It could hardly be better done. As a whole, the picture is the best this distinguished amateur has yet produced, and will raise his reputation with artists by its technical skill, as much as with mountaineers by its truthfulness. Sir R. Collier’s other pictures of a glacier and of the Wetterhorn (in Suffolk Street) do not reach the same level.

Among the water-colour artists, Mr. G. Barnard, as almost an original member of the Club, claims first notice. A lover of the Alps before they had become a fashion, Mr. Barnard was one of the first to paint peaks as they are, and thus to make the most effective protest against the ignoble representations of them which were common twenty years ago. Those who have known his art during this period know exactly its characteristics. Pure in colour, painstaking in drawing, his most successful works are those which represent some quiet effect of evening light on the mountains. When he finishes away from nature he is apt to lose some of the character of the scene. His best drawing this year was a view from the Wengern Alp.

Mr. Croft does not want for force and daring. His danger lies rather in the facility with which he can seize a striking effect: a facility which, unless the painter bears in mind Sir Joshua Reynolds’s precept

that it is his business to lead the public up to his level, not to go down to theirs, is not without grave dangers. This year, however, Mr. Croft has produced much work which is open to no reproach on this score. His large picture of the Tschierva Glacier did not please us so much as many of the others. Nothing, however, could be more thorough and successful than 'A view in the Rosegthal.' 'The Matterhorn from the Stockje' was a noble ice-scene carefully and soberly worked out. The glacier foreground was particularly good, one of the best we have seen in water-colour. Among the most charming drawings were two of the promontory of Bellaggio. The numerous drawings of the Maritime Alps and the Estérrels from the neighbourhood of Cannes were also interesting. Snowy alps seen over blue waves are to most of us a novelty.

In the old water-colour gallery two Swiss landscapes occupied prominent places. Richardson's 'Valley of Lauterbrunnen' was a specimen of the old school. Whatever its merits as a drawing, as a representation of the scenery of the Oberland it was worthless. Collingwood's sunset from the Faulhorn was an attempt to deal with a most difficult problem. If there is one subject we should hesitate to recommend to artists it is half a panorama. The outlines of the Oberland peaks were correct, the colours unexaggerated. But the power shown failed to justify the selection of subject. A smaller 'Monte Rosa from the Moro' was more successful, rather because in a picture one mountain is better than half a dozen than from any superior force in the execution.

Having noticed in detail Mons. Loppé's pictures last year we shall not linger over this season's show. There were few large pictures and these were of a character already familiar. But there were a crowd of studies from nature, many of them of a value which the absence of frames, perhaps, in part concealed from the general public.

Hitherto ice has been Mons. Loppé's favourite study. He has now achieved a success in other 'Forms of Water.' The Märjelen See has often been painted. But we have never seen any representations of it approaching in local truth to some of these studies. A miniature iceberg floating upon its own shadow in the dark luminous lake under a stormy sky, was equally admirable in colour and composition.

Among the winter sketches the most remarkable were those of the Wetterhorn, and of the meeting of the Rhone and Arve. In the former the painter has caught Nature in one of her most exquisite moments. A mist has suddenly rolled away, leaving clear against the luminous, intensely frosty sky the great mountain, heavily draped in a snow-mantle, golden with sunset, except where the shadow of the Eiger lies upon it. There is no colour in the picture; for the foreground is a sheet of snow with some half-buried chalets. It attempts to do for the Alps in winter what Mr. Whistler has done for the Thames in fog.

Mr. E. Walton's exhibition contained some new work from the Engadine. But, unfortunately, there is little new to be said of it. Mr. Walton can paint a brilliant snow-peak or mountain mists as well, if not better, than any one. But he is content to repeat year after year

one or two effects, the supreme beauty of which is not so obvious to others as to himself, and for their sake to neglect all that gives their individual character to the various Alpine regions.

Two drawings of 'Davos in Winter,' by Harry Godwin in the Suffolk Street Gallery deserve mention for their delicacy and truth. We should be glad to see more of the painter's Alpine work.

Two foreign painters have carried us to the Himalayas and Caucasus.

The Russian Vereschaguine, whose very striking sketches of Central Asia were shown some years ago at the Crystal Palace, had this summer at Kensington a collection of views in India, amongst which were two very forcible pictures of Kinchinjunga and many oil-sketches of Himalayan scenery. The alpine landscape suggested by the great mountain seen from Darjeeling is the view of Monte Rosa from Monte Generoso. In each a great snowy mass towers over forty miles of lower hills.

Signor Premazzi exhibited at the Burlington Gallery some water-colour drawings of the Crimea and Caucasus, amongst which were views of Kazbek, Elbruz, and Ararat, and several on the Dariel road. They were exceedingly faithful, and made us regret that a painter with so much technical skill in the literal representation of scenery had not penetrated into the more beautiful portions of the Caucasian chain.

EXCURSIONS ROUND PINZOLO.—The descriptions I had read in 'Italian Alps' had for some time given me a great desire to visit the Trentino, and last year I had the satisfaction of spending six weeks in that beautiful district. Mr. Freshfield had suggested to me an excursion, namely, to the Lago di San Giuliano, and from thence into the Val di Borzago. As I consider this one of the finest easy walks in the district, I give the following details. From Pinzolo to the Lago di San Giuliano there are several ways. I decided to cross the flat and fertile valley, and to strike straight up the wooded slopes to the west of Pinzolo. At the first châteaux reached, I was told that the direct course I had taken was by no means the best, and that a path that zigzagged to the left was the easier route. The châteaux themselves are visible from Pinzolo, and any one wandering to them is rewarded by an unusually fine view of the shattered dolomite walls of the Brenta group. Passing laburnum trees in full flower, I turned to the right through the dense fir forest, and skirted the southern slopes of the Val di Genova, ascending slightly as I went. In a short time I emerged from the wood, and found in a small clearing a large stone-built malga. There were no herdsmen to inquire of, but a path stretched away evidently in the desired direction. Along this path I wandered amidst masses of rough granite rocks half covered with rhododendrons in bud and brilliant bloom, which stretched on every hand in countless multitudes. Ascending a slope I reached the summit, and saw a small lake immediately below me. This I at first fancied was the Lago di San Giuliano, but a reference to the Austrian Military Map corrected my mistake. I skirted this tarn, and crossed the ridge that rose beyond; but lost time amidst a wilderness of fallen rocks on the other side. The easier plan is to descend a little towards the Val di Genova, and cross a lower part of the ridge. Im-

mediately in front of me now lay the twin lakes of Garzone and San Giuliano; and hard by stands the little chapel built in memory of the hermit after whom the second lake is named.

I had now to decide how best to reach the Val di Borzago, for it seemed probable that if I at once climbed any of the mountains to the south, I might become so embarrassed by the confusion of ridges and peaks as to be compelled to descend into the Val di Rendena. This was the more probable as the clouds were now settling down on the summits with the persistence of this most melancholy season. I therefore crossed another ridge to the west of the two lakes, and passing by several tarns clustered in the next valley, I found that instead of a complex collection of rocky peaks, I had now only a single ridge separating me from the Val di Borzago. This I crossed by one of several gaps, on all of which, however, the clouds were now gathered gloomily. I came down by steep grassy slopes of the kind that some of our friends with nailless boots find only too easy to descend.

On reaching the highest châteaux, I was most warmly welcomed by the herdsmen, who probably had never before been visited there by any traveller; and who exhausted their vocabulary of German, consisting of about seven words, in honour of my arrival. They took me to be an Austrian officer of engineers, a distinction which I enjoyed throughout this district, my tent and sheets of sketching paper helping the illusion. I bade the herdsmen farewell, and while I pursued my downward course, I could still hear them vociferously interchanging remarks as to me and mine. The clouds were now lifting, and revealing wide-stretching snow-fields at the head of the valley, crowned by the rocky crest of the Carè Alto.

Passing down the lovely Val di Borzago, I was soon in scenes of the richest beauty, birch, and beech, and chestnut, flourishing as they seldom do among the mountains, and forming many a soft woodland picture, while high overhead gleamed the shining snows. At the village of Borzago I refreshed myself at the house of a facetious native, who had evidently suffered much from the fluids sold at inns which announced 'Buon Vino,' and he had determined if theirs was good he would sell bad. Accordingly he painted over his door 'Vendita di Cattivo Vino.' I only hope future visitors may find his wine as good as I did. This reminds me of a humorous tradesman in the recent Paris Exhibition, who put over his wares a large placard, 'This is the only stall in this department which has *not* received a prize medal.'

From Borzago to Pinzolo there is a good road, and the 7½ kilos can be done either on foot or in the stellwagen from Tione, which passes every evening; or the traveller may proceed much more comfortably in a carriage, ordered before starting, of that most attentive of hosts, Collini of the Corona.\* The route I have described will take about ten

---

\* In the Appendix to *Italian Alps* the two inns at Pinzolo are mentioned as Bonapace's and the Posta. At present, at any rate, Bonapace's and the Posta are one, and the Corona is the other inn. The Corona is the best suited, I think, for travellers, who will find there cleanliness and great attention from Signor Collini. They must not, however, expect to find im-

hours; and although probably there is no point more than 5,000 feet above Pinzolo, the several ridges to be crossed add to the total height to be climbed.

The Dos di Sabione has already been described in the 'Alpine Journal;' but the Palu di Mugbi (see Austrian map), which is several hundred feet higher, and which affords a finer view, has so far remained unnoticed. From the windows or the garden of the Corona at Pinzolo this mountain appears to be a spur of the Cima di Nafdisio, as Mr. Freshfield calls it, or the Cima di Vallon of the Austrian map. The way to the Palu di Mugbi is readily found; a new cart-track from Giustino leads to the Malga of Bandaloro, and the stream that supplies this ch  let may then be followed for some distance. The traveller now mounts the green slopes of the alp that divides the Dos di Sabione from the Pra Fiori ridge, and he can then choose his own way among the junipers and *legf  hren* to the top of the pyramidal Palu di Mugbi. This mountain breaks away on the eastern side into precipices of dolomite, and is thereby completely cut off from the Cima di Nafdisio, while its nearness to the Cima Tosa and other neighbouring dolomites, makes it an admirable spot for studying their strange and fantastic structure. To the south the traveller looks down the Val d'Algone, the steep sides of which are softened with the richest verdure, and in the distance the ridges of the sunny south are paled by excess of the Italian light. Turning northward, in the opposite direction, the eye ranges along the Val d'Agola, over the sterner slopes that surround the Hospice of Campiglio, and rests far in the distance on the Oetzthal Alps. The special glory of the view is, however, in the range to the westward, where Presanella, Adamello, and Car   Alto rear their noble forms, and are here seen to better advantage than from the lower Dos. An additional interest is given to this ascent by the rising into view over the lower parts of the Presanella of several peaks of the Ortler group.

While I draw attention to this view of the eastern side of the Adamello-Presanella chain, I would recommend that another point should be visited, which commands the northern side of the same range. Most of the travellers who take the Tonale pass are content with the glimpse they have from near the Austrian fort of the steeply scarped sides of the Presanella. If, however, any one on a clear day will take the trouble to mount even one of the lower spurs of the Monte Tonale, he will be rewarded by a magnificent view of the Adamello and Presanella ranges, the latter here in grand outline showing the three summits which have earned for it the name of *Il Triplice*.\* From this point, too, the eye may range over many a distant dolomite peak, the Lang Kofel and the Cimon della Pala being both in sight.

During the six weeks I spent in the Trentino I saw only three travellers. Many more will doubtless come this summer, when the Stablimento of Campiglio, burnt two years ago, is reopened. Long, however, may this district be preserved from the crowd which now

---

mediately on arrival complete provision made for them, but remember that at Pinzolo travellers are still few and far between.

\* See the illustration.



*A. Williams del.*

**PRESANELLA  
FROM MONTE TONALE**

renders the Engadine almost intolerable, and from the placards which there threaten condign penalties on the hapless tourists whose horses shall dare to trot in the streets, whose feet shall tread the fields, whose misguided fingers shall gather gentian, or who shall unwittingly purchase undried edelweiss!

ALFRED WILLIAMS.

THE PALA DI SAN MARTINO.—The following extract from the book at San Martino has been forwarded to us, recording a second ascent of this formidable peak by Herr Meurer's former co-editor Herr Isler:

'On the 11th August (1878) the second ascent of the Pala di San Martino was made. Guides (new to the mountain), Alessandro Lacedelli and Angelo Tangiacomi, both of Cortina d'Ampezzo. This second ascent was preceded by two unsuccessful attacks (on the 9th and 10th August), one from the south side, in which seven-eighths of the height of the peak were mastered, and the second by a gully which led to a point 500 feet below the summit.'

The route followed in the successful ascent seems to have been identical with Herr Meurer's.

A WINTER TOUR IN THE DOLOMITES.—Winter excursions in the high Alps are no longer the novelties they were when Mr. H. Walker and I crossed the Strahleck and Finsteraarjoch in December 1866. Mont Blanc, the Jungfrau, the Schreckhorn, and the Glockner, have all been climbed at that season; but I have not heard of any comprehensive tour of an Alpine district similar to that which (again with Mr. Walker) I made last January in the Dolomite mountains of the Southern Tyrol.

As we did not deviate from carriage roads and mule paths, the journey may reasonably be regarded as below the level of the Alpine Club and the 'Alpine Journal'; but I am not without hope that the following brief particulars may tempt some of the younger and more energetic members of the Club to improve upon our example.

We arrived at Botzen over the Brenner on January 19, in forty-eight hours from London. From there our route was as follows:—To Castelruth; over the Seisser Alp to St. Ulrich in the Groden Thal, returning to Botzen; by rail to Toblach in the Puster Thal; to Schludersbach; by the Lago di Mesurina to Auronzo, and round by Piève di Cadore to Cortina; round the Monte Cristallo by the Tre Croce, Lago di Mesurina, and Ampezzo Pass; over the Tre Sassi to Caprile and Agordo; by the Cereda Pass to Primiero; thence by St. Martino and Paneveggio to Predazzo and Vigo (from which place we had a glorious walk to the head of the Vajolet glen), and so by the Caresa Pass and Karneid Thal back to Botzen on February 2.

Now, of course, there was nothing exciting in all this; but we nevertheless spent a very agreeable fortnight. The whole country was deep in snow; but the weather was generally good, we saw everything to perfection; and although the appearance of tourists at such a season was an absolute surprise, we everywhere found most comfortable accommodation and excellent fare,—not excepting such out-of-the-way spots as Auronzo and Paneveggio. There seemed to be much more business doing in these valleys than, according to my experience, is the case in Switzerland in winter, and the inns are consequently better

prepared to receive strangers. The roads over the Ampezzo Pass, and *viâ* Paneveggio to Primiero, are kept open; while even from Toblach to Auronzo by the Lago di Mesurina there is a continuous local traffic, liable of course to be interrupted by bad weather.

The journey was our first introduction to the Dolomites. A preconceived idea we had formed, that the scenery must be grander in winter than in summer, was quite confirmed by what we saw and were told. Both Santo Siorpaes and Ploner of Schluderbach, unprompted and independently, loudly declared that the mountains were incomparably more striking as we saw them, snow covered, than in their summer guise. I greatly doubt whether either the Marmarole or the Antelao, if bare of snow, would have produced upon us anything like the effect which the former did as seen from Pieve di Cadore, and the latter all along the road from Tai to Cortina; while, to take an example of another kind, the walk from Agordo to Primiero over the Cereda Pass, which (except in 'Italian Alps') has been generally damned with faint praise, seemed to us, under the conditions in which we took it, the reverse of tedious, as well as extremely picturesque.

The mere valley scenery may very likely be less striking in mid-winter than in summer, and the landscapes as a whole may possibly lose something of the peculiar charm which is attributed to them by the devotees of the district. However this may be, we saw enough to lead us to hope to be, some day, in a position to make the comparison for ourselves, while we can without hesitation recommend those who as yet only know the country in summer, to make its acquaintance in winter at the earliest opportunity.

I ought perhaps to add, as a warning or an encouragement as the case may be, that winter ascents of the higher Dolomite peaks (with the exception possibly of the Marmolata) would probably be found extremely difficult, if practicable at all; and that it is very doubtful whether even the best of the local guides could be induced to undertake them.

A. W. MOORE.

THE CHAMONIX RÉGLEMENT.—The Préfet of Haute Savoie, by an edict dated May 25, 1879, has modified in some respects the Réglement of 1877. The following are the most important innovations:—

Two members of the French Alpine Club, to be appointed by the Sous-Préfet of Bonneville after reference to the 'Direction Centrale' of the Club, are added to the examining body.

Candidates for admission to the Company of Guides must receive two-thirds of the votes of the examiners.

*Travellers are free in the choice of guides.*

The general rules as to the number of guides to be supplied for glacier expeditions is followed by this very important exception. 'It is permissible for any traveller to take for the above-mentioned expeditions a less number of guides and porters, but on his own responsibility. Nevertheless, if the expedition with a reduced number of guides and porters offers dangers, the guide-chef and guides may refuse their services.'

The following alteration affects the guides only:—'On every guide and porter there shall be levied on behalf of the company the following

taxes, viz. 5 per cent. on ordinary expeditions, 15 *per cent.* on *extraordinary.*' This is a concession to the outcry raised by the tax of 20 per cent. on extraordinary expeditions created by the previous Règlement. But this monstrous imposition, worthy of the lowest type of trades-unionism, must surely disappear totally in the final revision which may be hoped for before next season. A tax levied on the best glacier guides for the benefit of the lazy mule-drivers is so obviously unjust and immoral, that it can only need attention to be called to it to ensure its repeal. We trust the Alpine Congress at Geneva will give the Préfet of Haute Savoie the benefit of its opinion on this subject, and make clear to him that the course hitherto followed in dealing with the guide question has resulted in depreciating the character of Chamonix guides, and in driving mountaineers to other districts, thus materially affecting the prosperity of the valley. A comparison of the number of glacier expeditions made with local guides in the Mont Blanc and Monte Rosa chain would prove this fact, which is within the knowledge of every recent traveller.

It is due, however, to French administration to say that its failure, as regards Chamonix, is to be accounted for in great part by the national crisis. There have been five Préfets at Annecy in two years! There is every reason to hope that the present officer will have time and disposition to deal with the problem which his predecessors have left him. It is worth his best attention. The affairs of Chamonix are in one sense those of a remote country village; but in another, the place, by its inseparable connection with the most famous mountain of our continent, has an exceptional importance, and what is done or left undone there is known and discussed in half the capitals of Europe.

THE DOM JOCH AND LYS JOCH.—In my paper, 'An Ascent of the Täschhorn from the Fée Glacier,' published in the last number of the 'Alpine Journal,' I made reference to the height of the Dom Joch in comparison with that of other Alpine passes. In my own MS. I had placed it third on the list, attributing to it a slight superiority over the Lys Joch. It appeared, however, to the editor, that my claim in favour of the Saas Grat Col was not so clear as to allow of the Lys Joch being thus definitely superseded; and he accordingly altered the order of precedence as I had given it.

I am by no means prepared to accept Mr. Foster's *estimate*, that the Dom Joch 'cannot be less than 14,200 feet;'<sup>\*</sup> but at the same time, such superiority as I claimed for it, although a narrow one (22 feet) remains undoubted according to present measurements.

For the height of the Dom Joch, we have the excellent authority of the Federal Survey and Swiss Alpine Club Maps, in both of which it is given as 4,286 mètres, i.e. 14,062 English feet. The height of the Lys Joch has, unfortunately, not been trigonometrically obtained. Zumstein gives the height of the plateau as 14,100 feet, which may fairly be taken as about that of the pass (though he speaks of *ascending* somewhat to it). This barometrical reading was taken on July 31, 1820.† It is not, however, possible to place implicit confidence in the

<sup>\*</sup> *Alpine Journal*, vol. iv. p. 372.

† *Ibid.* vol. v. p. 136 *et seq.*

accuracy of Zumstein's result, on account of the error, since established in his hypsometrical calculations as to the Vincent Pyramid and Zumstein Spitze. The altitude as given by him in this latter case was in excess of the real height, as since ascertained, by 88 English feet. 'Ex uno disce omnes,' may not unreasonably be quoted against him. The only authorities of any real importance, are Mr. Tuckett's determination, and the deduction which is to be drawn from the fact, that the closely neighbouring summit *marked* Balmenhorn (but which is probably the 'Schwarzhorn,' of Signor Prina, when he made the Ippolita Pass, on September 3, 1875) \* is 4,324 metres, or 14,187 English feet. This rock is visible in photographs of the Monte Rosa chain taken from the Riffelberg, over the depression nearest the Lyskamm, which is, however, somewhat lower than the true Lys Joch. Mr. Tuckett estimates this peak at 100 to 150 feet above the Col. On June 15, 1861, Mr. Tuckett spent an hour and a half upon the Col itself, and the results of his barometrical and (two) boiling-point observations (after comparison with corresponding ones on the Great St. Bernard) enabled him to deduce the height of the Col as follows:—Barometer, 14,053 English feet; mean of two boiling points, 14,028; mean, 14,040·5. Since the appearance of my paper, published in the last number, I have corresponded with Mr. Tuckett on the subject, and he sees no reason to doubt the practical accuracy of his figures thus given.

M. Joanne and Herr Tschudi in their well-known Guide Books, and the Abbé Gorret (in his Guide Book for Aosta and its neighbouring valleys, published in 1877), credit the Lys Joch with 4,344 metres (14,253 feet). These reckonings are obviously derived from the figures 4,344 on the Federal and Swiss Alpine Club Maps, which though printed on the Lys Joch, refer to the Ludwig's Höhe, and not to the pass.

F. T. WETHERED.

AN ALPINE VETERAN.—I regret to have to ask space to record the death of a famous mountaineer, the dog Tschingel, which occurred at Dorking on June 16.

Tschingel was purchased in the Lötschthal when a puppy by Christian Almer in September 1865.† She made her *début* as a climber by an ascent of the Torrenthorn from the Maing glacier, and a few days after crossed her first glacier pass, that from which she derived her name. For several years she lived at Grindelwald as the watch-dog of Almer's house, and in July 1868 passed into the possession of Miss Brevooort and myself. In order to follow us she had perforce to climb peaks and traverse passes, and she acquitted herself so admirably that for nine summers (1868 to 1876) she was our constant companion in our Alpine campaigns. Her list of 'grandes courses' amounts to no less than fifty-five, besides numberless excursions in winter and summer on glaciers and up to bivouacs, beyond which it was not judged prudent to take her. Among her more remarkable feats were Mont Blanc, Monte Rosa, Finsteraarhorn, Aletschhorn (twice), Nesthorn, Jungfrau from Wengern Alp, Jungfrauoch with *descent* to Wengern Alp, Eiger, Wetterhorn, Mönch

\* *Alpine Journal*, vol. vii. p. 321.

† Vide George's, *The Oberland and its Glaciers*, pp. 205 and 208-10.

from Wengern Alp, Ochsenhorn and Joch, Grand Combin, first ascents of the Râteau, the Grande Ruine, the northern Aiguille d'Arve (lower summit), Pic de la Grave; first passages of the Col de la Casse Déserte, Col du Vallon de l'Enchâtras; also the Col de la Pilatte (*descending* to Vallouise), the Col des Ecrins, Brèche de la Meije, and Col du Glacier Blanc. In no one instance did she ever make a false step, and very rarely required assistance; but on the Diablerets showed a local guide the best way down the precipices of the Creux de Champs. Her Alpine career closed with the death of her mistress. From that time she spent a quiet English country life, beloved and respected by all who knew her, until she passed away at a good old age. Of her excellent qualities this is not the place to speak at length. Suffice it to say that she had every canine virtue, was very good-tempered, extraordinarily intelligent, and of unswerving loyalty and affection to those around her.—W. A. B. COOLIDGE.

---

## NOTICES.

GUIDEBOOKS.—Several of the old-established guidebooks have recently appeared in new editions. 'Murray's Handbook,' without changing its original character as a general traveller's guide, has at last been brought up to date with regard to glacier expeditions, and contains much information useful to mountaineers and not to be found elsewhere. The portion dealing with the Pennine Alps having passed through the hands of the Alpine Clubmen who know them best, may be trusted to contain the most recent and accurate information; and young travellers may now read the chapters of general advice with a certainty of finding in them the results of the best experience of English mountaineers. Special attention has been paid throughout to the class of travellers who, without being mountaineers, wish to make a few of the easier glacier ascents and excursions. For example, the relative difficulty and merits of the various passes of the Mont Blanc chain are adequately set out. Several new district maps have been inserted, and those of the Chamonix and Zermatt districts have been re-engraved. The work has been divided into two volumes convenient for the pocket.

Herr Karl Bädeker has issued new English editions of his Handbooks for Switzerland and the Eastern Alps. They are concise, and correct, and the editor has carried out his aim in every respect with singular industry and ability. The only technical oversight we note is the use of French feet in some of the panoramas and of mètres in others, while in the text English feet are used. Whether the result is our ideal guidebook is another question. For mere practical information these volumes are probably, as far as they go, the best of their kind. Nowhere else do we find so many details as to prices and modes of conveyance. In maps and panoramas they distance all rivals. They do these things better in Germany! But as books they seem to us to have the fault of being unreadable; and owing doubtless to the necessity for compression, the descriptions of the principal routes above the snow-