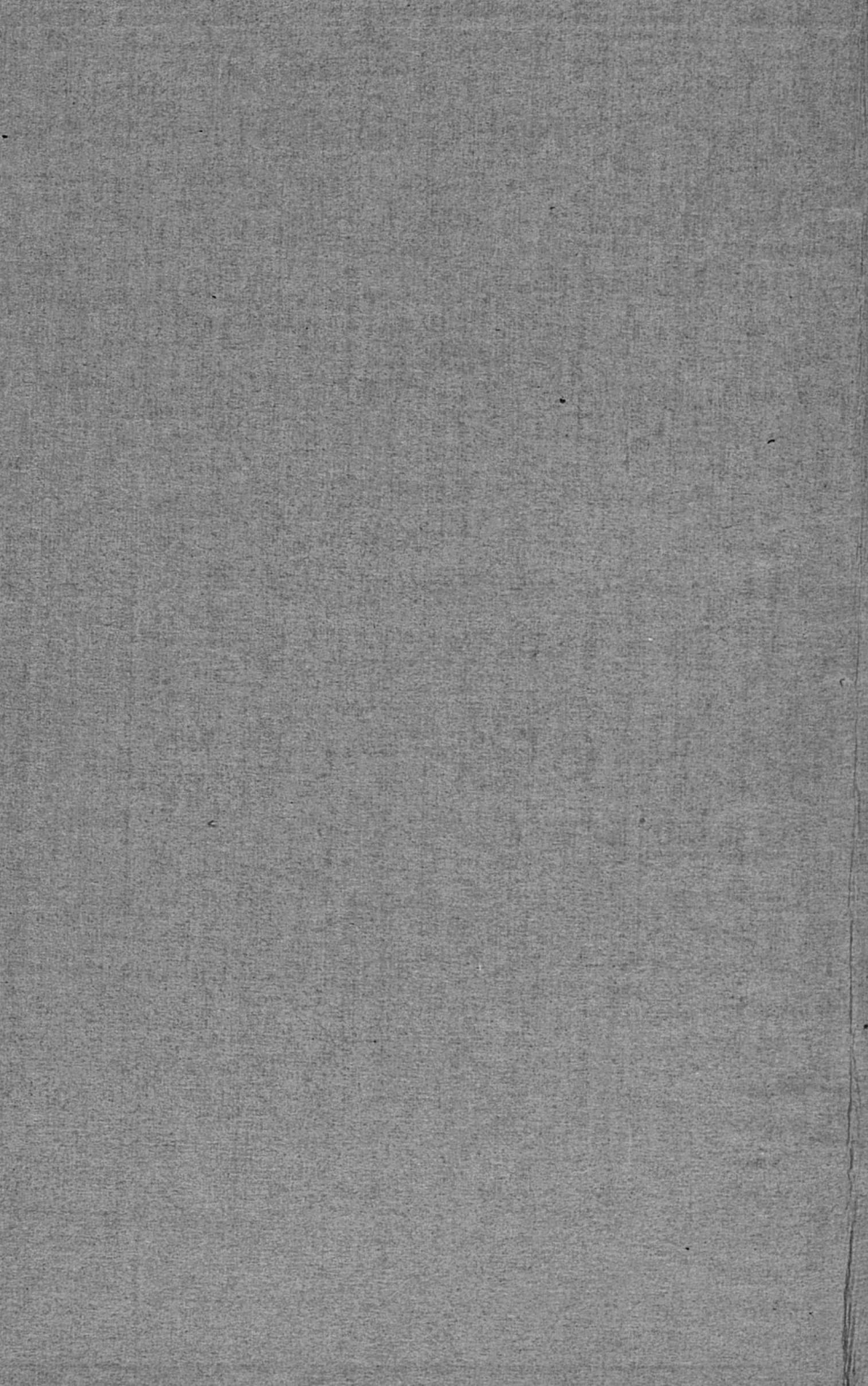
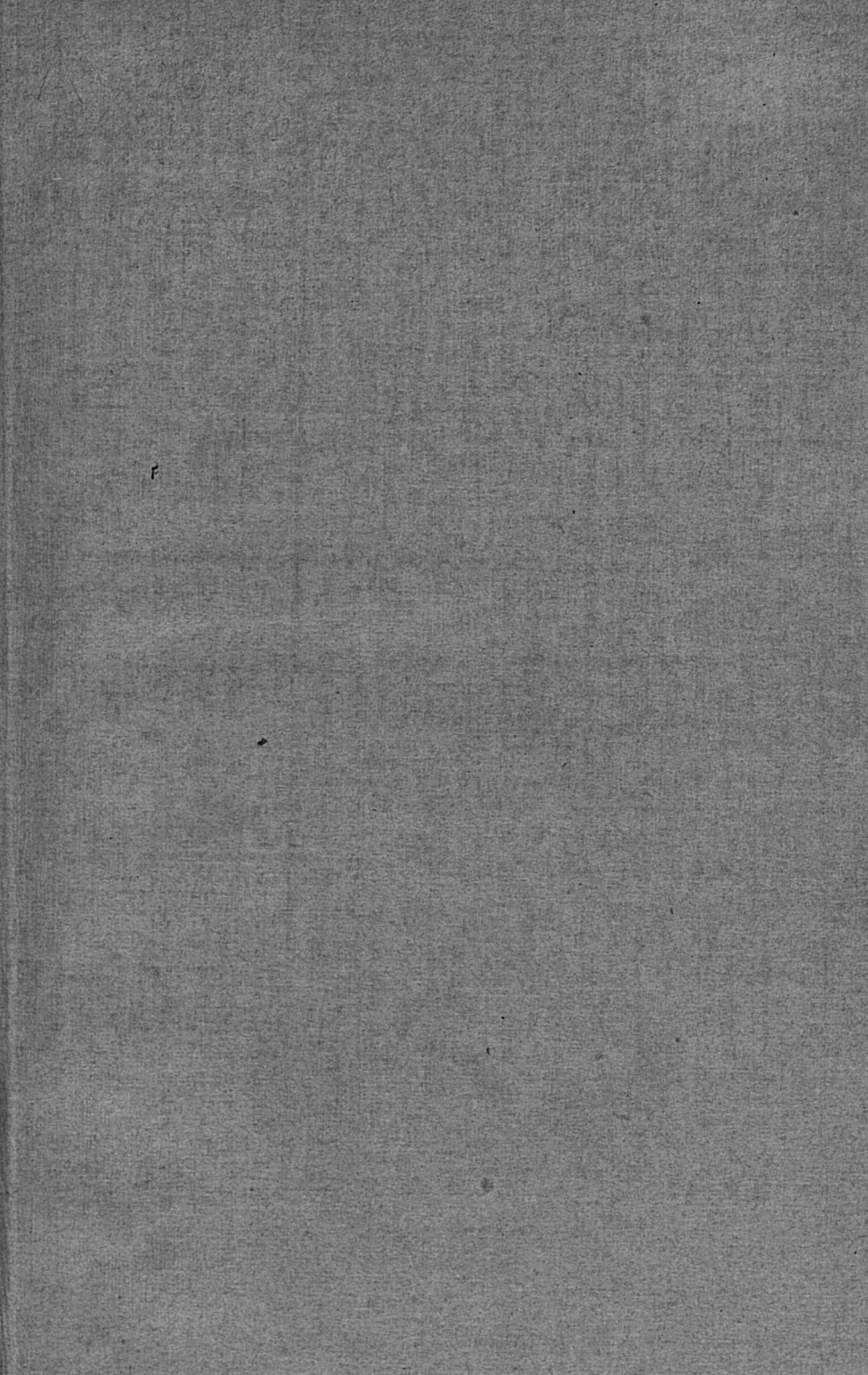


WITH CAMERA & RÜCKSACK  
IN THE  
OBERLAND & VALAIS

REGINALD A. MALBY





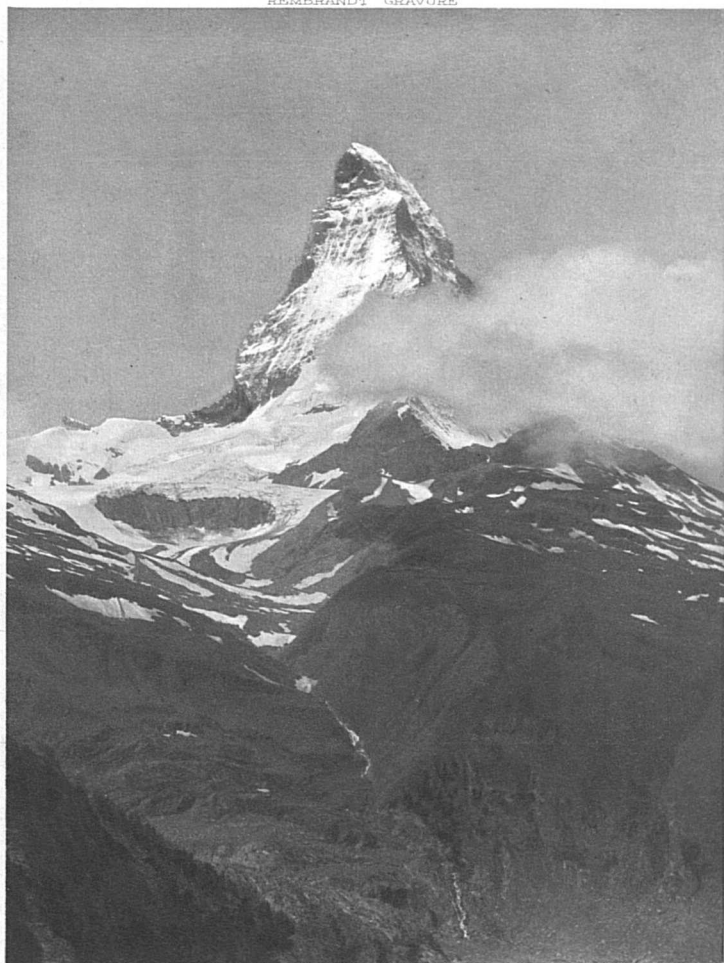


WITH CAMERA AND RÜCKSACK IN  
THE OBERLAND AND VALAIS

*At the end of this work will  
be found particulars of "The  
Story of my Rock Garden"  
by the same author as this book;  
also of other gardening books.*



REMERANDT GRAVURE



THE ROCK PINNACLE OF THE MATTERHORN



WITH CAMERA AND  
RÜCKSACK IN THE  
OBERLAND AND VALAIS

BY

REGINALD A. MALBY,  
F.R.P.S., F.R.H.S.

*Author of "The Story of my Rock Garden"*

WITH OVER SEVENTY PHOTOGRAPHIC STUDIES BY THE AUTHOR,  
IN COLOUR, PHOTOGRAVURE AND HALF-TONE.

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LONDON  
HEADLEY BROTHERS  
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1913

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DEDICATED  
TO  
THE REV. CANON HORSLEY, M.A.,  
IN WHOSE PLEASANT COMPANY I MADE  
MY FIRST ACQUAINTANCE WITH  
THE MOUNTAINS

BIBLIOTHEQUE  
CANTONALE  
DU VALAIS



WALLISER  
KANTONS-  
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## INTRODUCTION

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WITH the increasing facilities which each succeeding year brings to the holiday-maker, the opportunity of visiting "the playground of Europe" is greatly extended, while the delights of a holiday in the mountains, even if of comparatively short duration, are becoming more and more generally recognised.

Whilst a visit to Switzerland, merely as a sight-seer provides a wealth of entertainment, added interest may be derived by the pursuit of some hobby or research among the mountains. Having pursued, with some amount of success, the cultivation of Alpine plants in my small garden near London, my interest was awakened as to the conditions under which these jewels of the mountain-side grew in their native habitat, thinking thereby, that from knowledge so gained, a better understanding of a plant's requirements in the lowland gardens might be secured and possibly provided. Being an enthusiastic "camera-man," and having some experience of plant photography, it occurred to me that such a trip might be

made of considerable interest, by attempting to obtain some pictures of the Alpine flowers in their native home. The following pages will evidence my success in this direction.

I would therefore ask my readers to accompany me in imagination on two short Swiss holidays with rucksack and camera. The particulars of my photographic outfit, and the various methods of overcoming the difficulties inseparable from picture-making at high altitudes, may perhaps induce other devotees of the camera to allot some of their holiday time to the pleasurable delights of following up some subject with which they are already familiar, and so utilizing the pre-eminent "recording" qualities of the camera in a direction which will not only give a great deal of pleasure, but will also have the more lasting qualities of usefulness.

PART I  
IN THE OBERLAND



## CHAPTER I

### THE START

WHEN contemplating my first Swiss holiday, having heard so much about the beauties of the Lake of Lucerne and its mountainous surroundings, I was desirous of securing a glimpse, if nothing more, of that picturesque pleasure resort. As my holiday was only to be of short duration, I decided to limit my visit to the Bernese Oberland—that great snow-capped range extending roughly from the western end of the Lake of Geneva to Lucerne—whose predominating summits are known as the Wetterhorn, Finsteraarhorn, the Mönch, and the Jungfrau.

Knowing nothing of the language, or of continental ways, I decided to join one of the touring parties which are now so universal. Thanks to my friend, Mr. C. F. Ball, who eventually accompanied me on this holiday, my attention was called to the party which the Rev. Canon Horsley annually takes to the mountains. I communicated with the Canon, who gave me a most cordial invitation to join. For many years past the Canon has made Meyringen his head-quarters. This is a small town at the upper end of the valley,

through which the river Aare flows before emptying itself into the beautiful Lake of Brienz. This lake is connected with Lake Thun, and at the junction stands Interlaken, backed by the glittering snow-clad summit of the Jungfrau.

As a centre for mountain rambles, Meyringen has a very happy situation. It is surrounded by steep mountain slopes, leading to the higher snow-clad peaks. These provide excursions innumerable, for the pleasure seeker, the naturalist and the photographer.

On June 1st we left Charing Cross at 9 a.m. for Dover, where we embarked on one of the Belgian turbine steamers, *en route* for Ostend. The weather was all that could be desired as we warped out of the harbour. The brilliant sunshine lit up the white cliffs which stood like giant battlements behind the town. We were in the best of spirits—even those of the company who were not good sailors faced the four hours crossing with equanimity, owing to the gentle sea and steadiness of the boat.

Early in the afternoon, the low sandy shore of Ostend hove in sight, looking at first, through the hot, shimmering air, like a bank of fog, and as we approached revealing itself in all its appalling flatness. How many times have visitors to my native county, spoken slightly of flat Essex. Surely they can never have approached Ostend from the Channel, or they would consider Essex really mountainous. Certainly one's first impression of the Continent, seen from this point

of view, is not encouraging! However, the gay crowds of bathers, disporting themselves in the shallow water, or seated leisurely on the sands, clothed in a variety of highly coloured, even if scanty, costumes, served to amuse us, as our vessel slowly made her way to the quay, where all was bustle and excitement. Shouldering our baggage, we endured the perfunctory Customs examination, and thence proceeded to our special train. With little delay, though with much shouting and blowing of tin trumpets, we moved out of the station, on our long run to Bâle, where we were due at five o'clock the following morning, passing Brussels, Luxembourg, Metz, and Strasbourg on the way.

Whiling away the night as best we could, with the help of whist and fisherman's yarns, and enlivened by the visit from a very fierce looking Customs official as we crossed the frontier into Luxembourg, we eventually dozed off to sleep, waking early in the morning, in the cramped and weary condition inseparable from a long railway journey. After a refreshing wash, ably seconded by a hot cup of tea, and a stroll along the corridor, we felt somewhat more alive, and viewed with much interest the pleasant scenery through which we were rapidly passing. Almost before we realized it, the suburbs of Bâle came into view, and before long we had drawn up at the station, where, in truly *al-fresco* manner, our breakfast was waiting us—spread on snowy-covered tables arranged on the wide platform.

Whether it was the crisp morning air, or the delicious coffee, I cannot say, but we certainly did full justice to that breakfast, and afterwards enjoyed a stroll through the fine old town, noting especially the clean appearance of the houses, with their green sun-blinds, the broad streets, and the beautiful metal-work on the magnificent bridge which spans the mighty river Rhine. The clear blue water of the river is in singular contrast to our own muddy Thames at London Bridge.

Returning to the station, we entrained for Lucerne, getting a little later our first glimpse of the "snow-caps" far away in the distance. The character of the scenery as we approached the Lake of Lucerne was magnificent, but as on this outward journey we had little time to spare, I will leave all reference to it till our return, when we had more leisure to enjoy the beauties of the neighbourhood.

At Lucerne we again changed trains, this time on to the mountain railway, which runs over the Brunig Pass, 3,300 feet high, and down the steep mountain barrier which separates Meyringen from the outside world.

From the top of the Pass we obtained a glorious view over the rich and fertile valley of Meyringen, with the snow-streaked Schwarzhorn rising up against the blue sky. As the train descended the steep mountain side, the rocky ground was mantled with many varieties of ferns and flowers—bright rosy patches of *Erinus alpinus*, and sparkling tufts of *Gentiana verna*.



The fresh green foliage of the Robinia trees, which here grew thickly on the rocky banks, threw a delicious shade. From this cool spot gleamed the beautiful orange flowers of *Lilium croceum*.

Soon after noon we drew into the station at Meyringen (only twenty-eight hours after leaving Charing Cross), and here all was bustle and excitement, as we claimed our luggage from the fourgon and took our seats in the carriages which were awaiting us. A drive of a few minutes brought us to the Hotel Sauvage, which was to be our headquarters for the next few weeks.

The "Sauvage" is a handsome and comfortable hotel, situated in the main street, and surrounded by ample pleasure grounds, where shady trees and brilliant flower beds give a sub-tropical aspect to the whole. A particularly fine display of blue Iris, round the margin of a crystal pool, provided a delightful splash of colour, whilst the great stone portico was draped with the rampant growth of *Aristolochia siphon*, or Dutchman's pipe.

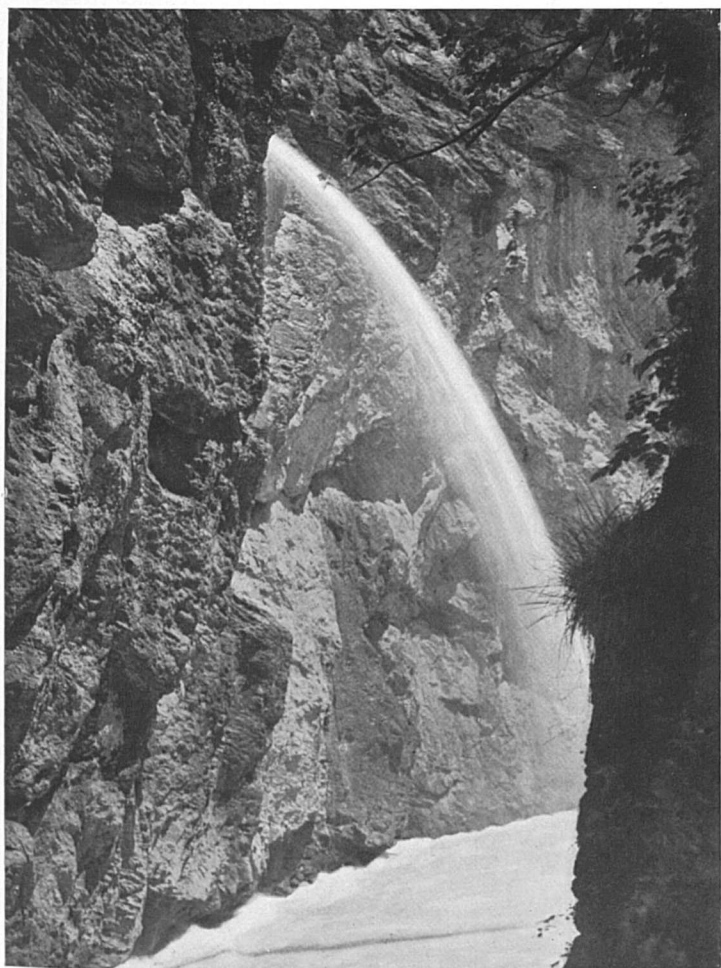
In the afternoon we sauntered about the village, noting with keen interest the quaint old châteaux which still remain, although the majority of these picturesque buildings were destroyed by a disastrous fire in 1891.

Meyringen, the chief village of the Haslithal, is situated in a level valley, 2,000 feet above sea level, with the mountains of the Hasliberg (attaining a height of 8,000 feet) on one side, and the Engelhorn, and

the Schwarzhorn on the other,—while dominating the whole is the mighty Wetterhorner group. These mountains give birth to the beautiful Rosenlauri glacier, from the foot of which issues the swift-flowing Reichenbach, bounding along over an uneven bed, and finally plunging in a gigantic leap, known as the Reichenbach Fall, into the Meyringen valley, where it is quickly lost in the white waters of the river Aare. On the opposite side of the valley, and within a few minutes' walk of the village, is the Alpbach Fall, coming down in a series of cascades from the Hasliberg, and making constant music for the visitor in the hotel garden.

The chief sight of Meyringen is, however, the Aareschlucht, or the Gorge of the Aare, where for close upon a mile the river rushes between precipitous cliffs, in many places only a few feet apart, while in others opening out into a more spacious canyon. In the more restricted places, the water swirls and roars, in its endeavour to pass the obstruction, making the cliffs echo with its terrific thunder, while even on the hottest day a cool refreshing air, filled with wisp-like spray, pervades this enchanting spot.

While the beauties of this ravine were formerly hidden from the visitor, it is now possible to traverse its entire length by means of wooden galleries supported on iron struts let into the face of the cliff, a few feet above the surging torrent. It was with no small amount of interest that we visited this wonderful



WATERFALL IN THE GORGE OF THE AARE.  
(See page 17.)



gorge, which showed very clearly how, century after century, the river has bitten deeper and deeper into the hard rock, cutting the channel through the limestone barrier, to its present level. At one point, over the rocky wall, a silvery waterfall pours its limpid stream into the river below, sending up showers of spray, which in the brilliant sunshine refract the light into myriad rainbow tints. Whole stretches of the cliff face were white with the bunched flowers of *Anemone narcissiflora*, which found roothold in the crevices and seemed to appreciate the moist atmospheric conditions prevailing there. The illustration opposite indicates in a modest way a portion of the gorge, though, owing to the confined space, it was not easy to obtain a realistic photograph.

The chief industry of Meyringen, which is shared with the neighbouring village of Brienz, is wood carving. This is carried on chiefly during the long winter months when the snowy mantle, often four or five feet thick, renders outdoor work impossible. Certainly, the articles exhibited in the shops show very considerable skill on the part of the peasants, and appear to command a ready sale. The rough native pottery, known as Thun ware, is interesting and often artistic, though it does not compare with the carving for decorative treatment.

Our party at the hotel was a particularly jolly one, and in the evening after dinner we were frequently regaled by the Swiss Choral Society, who gave us many

of their national songs, while we returned the compliment. On wet days the Turn Halle was very kindly placed at our disposal, when we lapsed into childhood again, and amused ourselves with cock-fighting, three-legged races, and blind-man's-buff.

Under the able and courteous leadership of the Canon, a number of expeditions were mapped out, and these we enjoyed on succeeding days. We also made a number of excursions on our own account. On a few of these "tramps" I will now ask you to accompany me, and I will endeavour to portray, as clearly as words can do, the many beautiful scenes and floral treasures of the Alpine regions.

## CHAPTER II

### EXCURSION TO THE MÄGISALP

CHATTING one evening with the Canon we learnt that on the Mägisalp—an upland pasture, some 4,500 feet high, we should in all probability find, in crevices of the rocks, quantities of *Primula viscosa*, a rosy-flowered primrose, common to high open situations in the Oberland. What interested us more was the report that, not infrequently, a pure white form of it was to be found on the Mägisalp. The following day, therefore, after an early breakfast, a party of us started off under the guidance of Canon Horsley,—my companion and myself on the hunt for Alpine plants—while the others were hoping to get some tobogganing on the snow slopes, for we were told the wintry mantle was not yet dissipated.

Our route lay up the zigzag path and stairway which leads over the Alpbach Fall—a track cut in the face of the cliff-side, immediately above the foam-flecked torrent. From the boulder-strewn bed beneath the fall there rises a continuous vapour cloud, drifting first one way and then another, as the breeze catches it, drenching the unwary visitor who approaches too closely.

At the head of the second fall the track crosses the stream by means of a light bridge, and makes its way along the opposite face of the gorge. Here all the rocks were glistening with moisture, and ferns decorated every minute crevice, whilst mosses of most brilliant emerald clothed its face. In many places the fissured sides of this cliff were sheeted with the dwarf blue hare-bell, *Campanula pusilla*, a delightful little plant with the happy disposition of seeming thoroughly at home in our English gardens. Just at the entrance to the steeper canyon-like portion of the gorge, before we exchanged the brilliant sunshine for the semi-twilight of the ravine, the rocks were mantled with the dwarf trailing growths of *Globularia nana*, almost hidden under their myriads of bright blue daisy-like flowers. Never had I seen this pretty plant flowering in such profusion; possibly it delights in a more generous supply of sunshine than our half-hearted summers usually give it, while the complete rest during the winter, owing to its covering of snow, must tend to conserve its energies for the great display in June, instead of being frittered away in sundry false starts, as happens during mild spells in an English winter.

The prospect from this point was delightful. As we looked down, Meyringen was spread out before us like a toy village; the silvery ribbon on its further side indicated the course of the Aare, whilst on the opposite side of the valley the cloud-like mass of vapour hanging above the trees denoted the position



of the Reinchenbach Fall. As we looked, the wind caught the drapery of mist, which usually veils its beauty, and wafted it on one side, and there, in the dazzling sunlight, was the beautiful cascade, flinging its immense volume of glittering water into the void beneath, producing the effect of molten silver flashing among the grey rocks and bronze-green fir frees. Above us, the fortress-like form of the Reichenbach Alp stood out in bold relief against the mighty mass of the Wetterhorn, with its flashing summits and rocky precipices outlined against the turquoise blue of the summer sky. High on the left was the great jagged ridge, which renders the Engelhorn so prominent and easily distinguished a feature of the landscape.

Turning from this sunlit panorama, we advanced along the semi-gloom of the ravine, with the roaring torrent bounding between its rock-girt sides, from which the tumult of its discourse was echoed and re-echoed till we could not hear our own voices. After passing more beautiful cascades, we at length entered upon a woodland path, where the comparative silence came as a welcome relief to the noise of the torrent.

The meadows which now came into view were astonishing in their brilliancy. As far as we could see, the grass was crowned with a tapestry of many colours, the restful note given by the pine trees scattered on the hill sides serving to heighten the effect. Everywhere the Campanulas were nodding in the breeze, while the large, daisy-like flowers of *Chrysanthemum Leucanthe-*

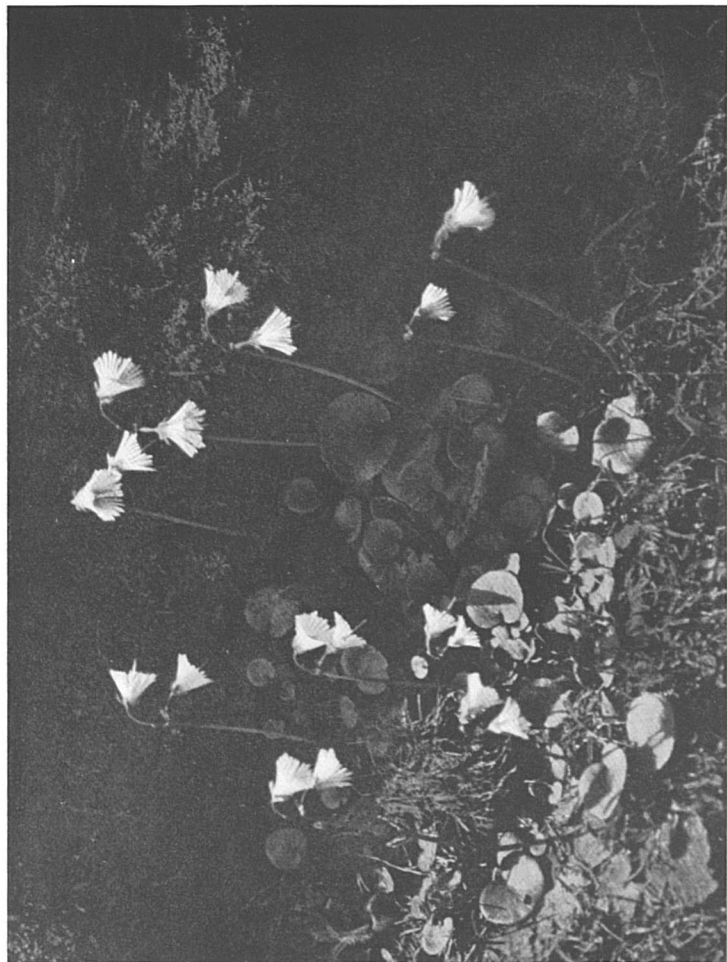
*mum*, with *Astrantia major*, and yellow Buttercups, mingled together to provide a display unlike anything to be seen in this country.

As we rose the herbage become more dwarf, and before long, on the more open part of the alp, at a little distance from the fringe of the thinning pine trees, the rich blue trumpets of the *Gentianella* (*G. acaulis*), in all their radiant beauty, spangled the turf. Here it grew like any common daisy in our fields, its tough, leathery leaves rising scarcely more than an inch from the ground, while projected on their two-inch stems the glorious flowers lifted themselves to the sunshine. As an unfortunate resident within the smoke zone of London, *G. acaulis* resolutely declines to flower at all with me, merely offering blind calyces instead of rich celestial blue trumpets. The profusion of this display was therefore all the more welcome.

Within a few yards other splashes of blue caught our eye, and these proved to be tufts of the even brighter and more graceful Vernal Gentian, whose dainty stars were produced in such abundance as to entirely hide the tufts of leaves from which they sprang. Needless to say, the camera was frequently in requisition to portray these lovely inhabitants of the sunny uplands, whilst numerous roots found their way into our collecting bag.

As the morning was by this time well advanced we decided, upon reaching a tiny mountain stream, whose crystal waters promised a refreshing draught, to rest





SNOWBELLS (*SOLDANELLA ALPINA*),

(See page 34.)

awhile before proceeding on the last half-hour's tramp to the Mägisalp.

Stretched at our ease under one of the pine trees, whose wind-riven branches just tempered the fierce onslaught of the mid-day sun, it was delightful to contemplate the beauties surrounding us. Close at hand the pasture incline was splashed and starred with the gentian flowers; to our right the pine-trees thickened, their dark needles and russet bark making a harmonious setting to the lime-stone cliffs rising sheer above them. Away in the middle distance, and 2,000 feet below us, the flat-bottomed valley of Meyringen lay slumbering in the noon-tide heat, the stone buildings and rich brown wooden *châlets* forming an irregular tangle among the trees. To the south, softened by the summer haze hanging over the lower levels, the beautiful Lake of Brienz lay like a shimmering opal, set in the surrounding mountains, reflecting the masses of cumulus cloud which sailed majestically across the azure vault of heaven. To the left the snowy summit of the Schwarzhorn rose above the nearer pine-clad shoulder, and concealed the glorious Wetterhorn.

Wafted on the scent-laden air came the musical notes of the cow-bells, the joyous cries of the children coming out of school, and mingling with these softer distant sounds, the liquid cadence of a mountain rill, near at hand. No wonder we prolonged our rest beyond the few minutes we had promised ourselves, being loth to

break the charm which the wondrous landscape wove about us. However, even in them ountains, time waits for no man, so we compelled ourselves to shoulder our impedimenta, and follow the track over which our companions had already passed, their keen anticipation of snowballing and glissading having lent wings to their feet.

We soon came upon a few outlying specimens of the Mountain Crocus, a long, narrow, graceful cup, white or pale lavender in colour, rising from the moist alp. Before long these lovely blossoms of *Crocus vernus* sheeted the whole ground. Seen at a distance, wide stretches and drifts would appear pale grey in tone, from multitudes of these opening flowers piercing the dark and sodden soil but recently covered with snow-drifts. Here, too, the lavender blossoms of the Snow-bells or Soldanellas, were just unfurling, the daintily-fringed petals giving them a fairy-like appearance. This plant, allied to the primroses, not infrequently pierces the thinning snow-mantle—and in several places I saw the purplish flower-stem rising through the snow itself.

With the majority of alpine plants the point which strikes the visitor most forcibly is the wonderful profusion in which the flowers are to be found. While certain zones appear to be reserved for various species, when the particular altitude or station is reached, the whole place abounds with its special plant or plants. The Soldanellas were no exception to

this rule, and as we proceeded, the whole alpside became hazed with lavender drifts of them !

With the exception of a few dwarf willows creeping over the ground, nothing more of interest drew our attention till we breasted a little bluff. This brought us into view of the Mägisalp. To our surprise, instead of finding a somewhat level grassy upland, with streaks of snow lying in the sloping gullies leading to the higher portion of the surrounding mountains, the whole place was one uninterrupted expanse of dazzling whiteness. Owing, it appeared, to recent heavy falls, there was from three to four feet of snow over the whole of the alpside.

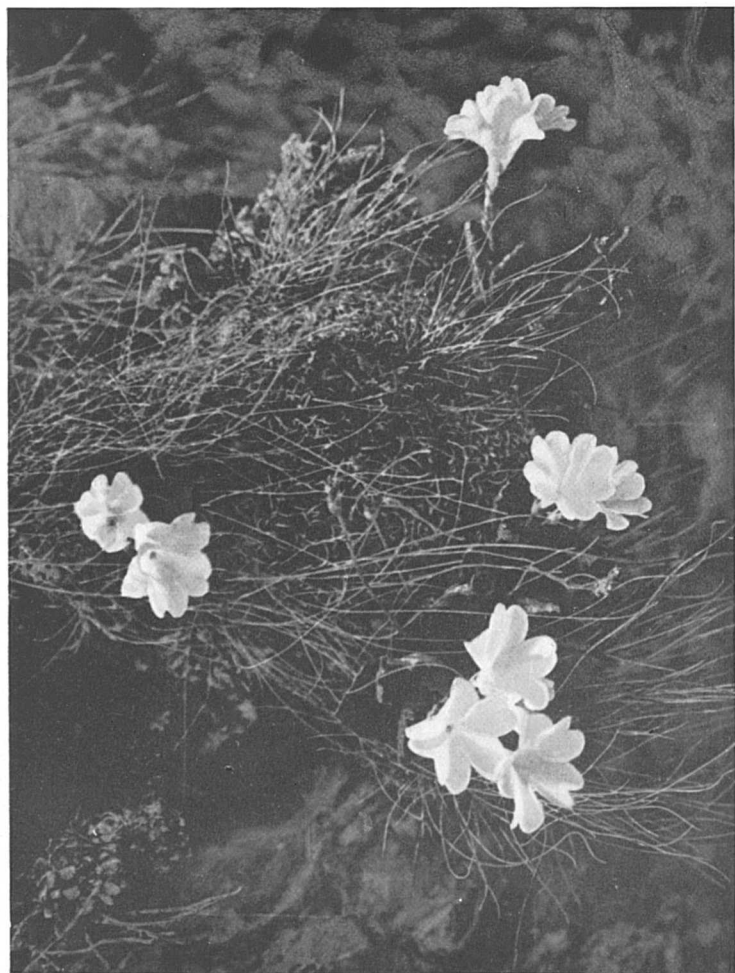
Our hope of finding any plants (particularly the rock primulas we had hoped to secure) sank to zero ; and as though in contrast to our disappointment, there came to us across the snowfield the joyous shouts of our friends, who we could see in the distance careering in a long sinuous line down a steep snow slope, culminating in a disordered medley of snow-covered figures at its base. Shaking the powdery snow from their garments they trudged up the side of the hill to repeat the joy of rushing down again—simply sitting on the slippery surface—when away they would go (in many cases in all sorts of attitudes), finally reaching the bottom, breathless and gloriously happy.

On the opposite side of the Mägisalp there rose a steep ridge, crowned with dark forbidding rocks, many of immense size. As the face of these rocks was

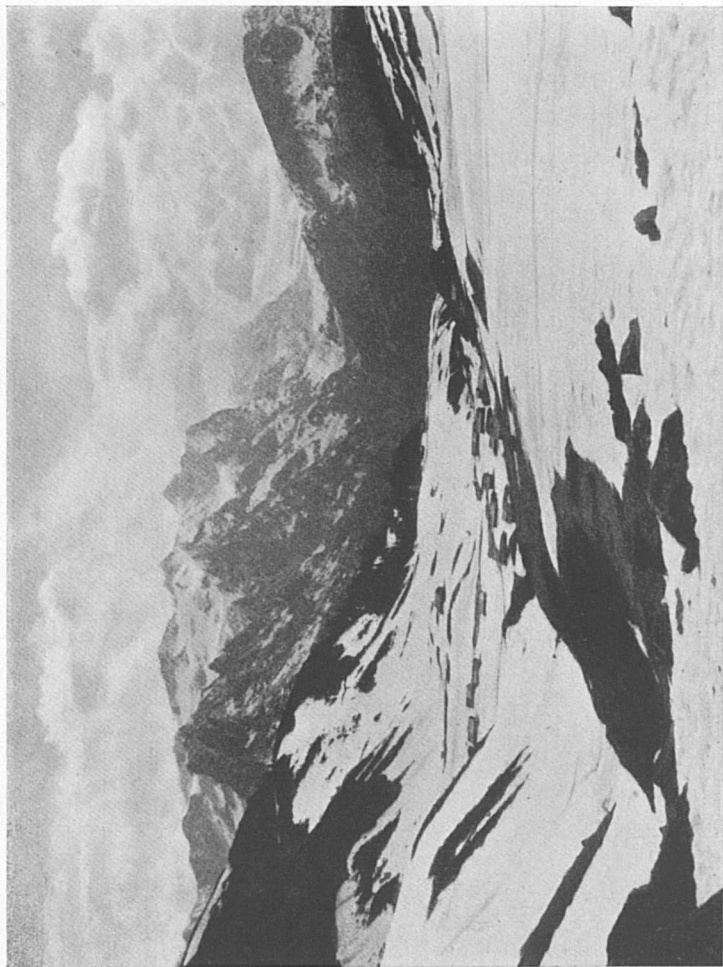
too sheer for snow to lie upon, we thought it was just possible that the primulas would be visible there. Accordingly we tramped across the loose snow, a tedious matter, loaded with the camera; first one foot and then the other would disappear suddenly in a soft place, and in our efforts to extricate ourselves we, as often as not, become more submerged than ever. However, "perseverance overcometh a multitude of difficulties," and in due course we arrived at the base of the snow-covered ridge, upon whose summit the exposed rocks loomed large and inaccessible. By carefully zigzagging our way up this bank—not an easy task, for occasionally a bad foothold would send us sprawling down a dozen feet or more—we eventually came within easy reach of the rocks, and there, gleaming at us with their rich, rosy-purple eyes, were the rock primulas, growing wherever there was a foothold on the stones, or amid tussocks of dwarf grass springing from the crannies.

The rocks were literally encrusted with the plants, and it was difficult to decide which of the many tufts to photograph. We spent some time hunting about this spot, scrambling among the outcropping boulders, and keeping an eye open for the rare white form we were so hopeful of securing. Before long I heard a shout from my companion, and on hastening over to him (a by no means easy procedure where a single careless step might send one headlong to the alp beneath), I found him gloating over a beautiful tuft





WHITE FORM OF *PRIMULA VISCOSA*.  
(See page 27.)



VIEW FROM PRIMULA ROCKS ACROSS THE MÁGISALP.  
(See page 28.)

of *P. viscosa alba*. We felt that all the labour we had expended in climbing up to the rocks was amply repaid by this "find," though when we set to work to take their photographs it proved easier in theory than in practice. Imagine a somewhat vertical face of rock, with an apology for a goat track round its base, rising from steeply inclined ground, where to see the plants it was necessary to tread with the utmost caution, and where one's third leg (the alpenstock) was a distinct advantage. This was the site upon which I had to rig up my camera. It will be realized, especially by other camera men, that even photography under such circumstances has its humorous side! Having found a foot-hold for two of the tripod legs, my companion was kind enough to take charge of the other one, and thus, by utilising him as a temporary lump of rock, I was able to secure a lodgment. After focussing up, I found it far from a simple matter to get at the dark slides in my bag, since it was practically impossible to move from my position without overturning the whole machine. By gentle and cautious degrees, however, I managed to stoop down and obtain the necessary articles, and in due course made the exposure, which, upon development, proved all that was desired. The illustration on page 26 gives a very fair representation of the way in which the Rock Primula grows—its cluster of flowers depending from a tussock of grass, while its tiny rosettes of leaves are almost hidden from view. When one considers the ideal

environment of this little primrose, the pure sun-flooded air, undefiled with the faintest trace of smoke, a copious water supply during the growing season, thanks to the melting snow above, and the perfect rest the whole winter through, it is surprising that they thrive at all in our lowland gardens, where almost every factor in their environment is reversed.

Having achieved a successful exposure, we turned our attention to our surroundings. From this elevated position, high above the snow-covered Mägisalp, the panorama was magnificent in the extreme.

It occurred to me that it would be interesting to make a photograph from this spot, illustrating the glorious outlook which these primulas enjoy, as they peep from their craggy homes. Turning my camera about, without moving the tripod, I exposed a plate in this reverse position, and the reproduction on page 27 shows the enchanting scene that lay below us. The tiny dots upon the snow, in the middle distance, are the châteaux we passed as we crossed the alp, while beyond looms the massive bulk of the Wetterhorner group.

Upon further search we come upon many more colonies of primulas, including some other white forms. A selection was added to our rucksack, and many of these still continue to flourish in my garden at Woodford.

Making a circle of the higher rocks we found a suitable snow incline extending for about a hundred

yards, and down this we decided to glissade. It was my first attempt at this rapid and delightful mode of descent, though my companion had enjoyed its pleasures before. I watched him carefully seat himself on the snow-slope, sticking his heels into the soft surface, to prevent a too hasty departure, then placing his alpenstock under his left arm so that it trailed somewhat behind him, and in such a position that he could throw his weight back on to it, thus causing his speed to lessen, as the point bit more deeply into the snow, or by moving it slightly from side to side, could guide his course, much in the same way as a paddle is used to steer a canoe.

Having, as I thought, thoroughly mastered these simple instructions, and seen him start, first slowly and then at an increasing pace, down to the snow-field below, I proceeded to follow suit. I was getting on splendidly (though slightly encumbered with my camera-sack) and was putting the finishing touches to my position, when all of a sudden I shot forward. Without thinking, I must have inadvertently released my grip of the snow with one foot, and the other, not being enough to secure me at this steep angle, I was taken by surprise, and lurched forward in anything but the regulation manner. Almost before I realized it I was flashing down the incline, broadside on, and at a speed that felt close upon sixty miles an hour. In trying to recover myself (a difficult task for a novice travelling at this rate) my alpenstock was wrenched

from my grasp, the slight retardation on one side, due to this, causing me to complete the descent with a most graceful spiral motion.

The whole episode was over in a few seconds, in fact, I think it was the most speedy portion of my Swiss trip, and when at last I had extricated myself from the cloud of soft snow into which I had finally come to rest, my companion was looking on, convulsed with merriment! Rather to my surprise, I was quite intact, as was also the camera, so, considering my first experience too short to get a fair idea of the sensation, I retraced my steps, and made the descent again, this time quite in the orthodox fashion.

Having enjoyed this pastime for awhile, we retraced our steps to the limit of the snow, and wended our way over the rock-strewn alpside, coming upon stretches which were yellow with the dainty flowers of *Primula auricula*, whose shell-like, powdery leaves, nestled into crevices amongst the stones, or clustered in colonies near some protruding rock. In places the Bird's-eye Primrose (*P. farinosa*) also occurred, though sparingly, this latter plant favouring a more moist position at the base of the slope where a rill of snow-water spread over the soil.

On the face of the more or less perpendicular limestone cliffs, kept moist by the soaking snow-water, vast quantities of the Alpine Butterwort (*Pinguicula alpina*) spread their rosettes of sticky leaves in the sunshine, while upon four-inch stems were raised

the dainty cream-coloured, somewhat viola-shaped flowers.

As we descended to the tree-clad slopes, at one point the ground was yellow, as far as we could see, with enormous quantities of oxlips in full bloom, giving a very curious effect—the trees appearing to rise from a yellow snow-drift.

By this time we were feeling somewhat hot and tired, and the sight of the quiet valley of Meyringen away there below us was most welcome. Zig-zagging down the steep sides of the Hasliberg, we passed field after field red with the spiked flowers of *Orchis mascula*, finally crossing the floor of the valley, amid meadows blue with sheets of *Campanula* blossoms, and *Geranium sylvaticum* in purple stretches among the grass.

It was with feelings of intense satisfaction, mingled with amazement at the prolific display of the alpine flowers, and the grandeur of the scenery, that I sat and smoked, in the garden of the hotel, after dinner that evening. While the soft strains of music were being wafted to me from the open windows, I mused upon the events of this, my first day in the mountains.

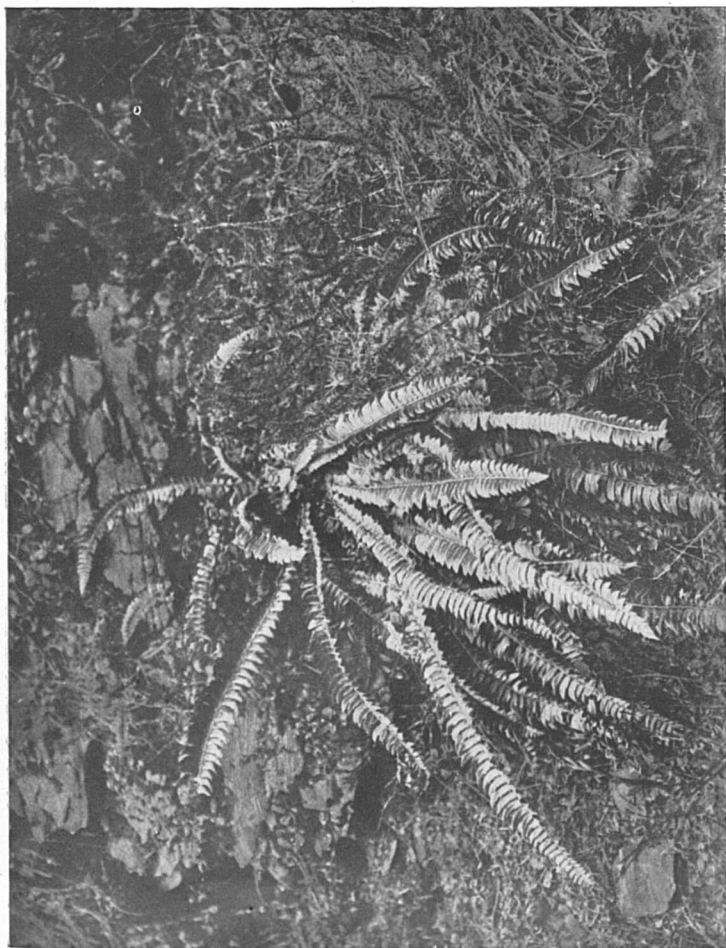
## CHAPTER III

### ROSENLAUI

THE walk to the Rosenloui glacier by way of the Reichenbach Alp, and thence through the wonderful gorge known as the Weissenbachschlucht, is reputed to be one of the most beautiful in Switzerland. As that choice buttercup, *Ranunculus glacialis*, which is said to exist at a higher altitude than any other plant in Europe, is to be found on the rocky ground near the glacier, additional interest was anticipated from this excursion, as we left our hotel early one brilliant morning. Down the main street we went, passing the little bridge over the Alpbachschlucht (to which I shall have occasion to refer later), and crossing the fine iron bridge which spans the swift-flowing Aare, we passed close to the starting point of the funicular railway, which crawls snake-like up the alpside to the head of the waterfall.

Disdaining the help of the funicular, we kept on our way, making a slight detour to visit the lower falls of the Reichenbach. Here the stream is broad, and comes sweeping down in magnificent cascades, the dark water-worn rocks piercing the swirling eddies. The very ground trembles with the thunder of its on-





THE HOLLY FERN.  
(See page 37.)



slaught, though within thirty yards the stream is controlled and harnessed to provide power for some saw-mills.

Mounting the steep wooded slopes, we soon left the roar of the water behind. Among the trees, through which the morning sun had not yet pierced, the dew lay heavily upon the grass, and moving sluggishly across the track, disturbed by our approach, were many salamanders, strange, jet-black, newt-like creatures, some six to seven inches long.

The trees suddenly ceased, and we were rising over open meadows. It appeared to be raining, the air being filled with a fine Scotch mist, wetting us very thoroughly ere we could unstrap our waterproofs. In a way, however, it was a false alarm—for although the wetting was beyond dispute, it was not raining, the moisture coming from the great vapour cloud which is always eddying above the mighty Reichenbach fall, and even as we realized this, a subdued thunder reached our ears from the famous gorge.

In a few minutes we stood on the precipitous edge of the vast chasm, into which pours the mighty volume of water in one gigantic plunge. While we stood fascinated by the beautiful form the falling water takes—breaking up into myriad rocket-like spurts—a puff of wind wafted the mist partially to one side, and there through the gap thus made the sunshine glinted, forming several glorious rainbow bands of colour just above the surface of the water.

I was very keen on securing a photograph of the upper part of the fall, and proceeded to erect my camera under a temporary roof formed by the focussing cloth, held aloft by my companion. Keeping things covered as well as I could, I focussed up, but owing to the moist atmosphere it was difficult to see anything on the ground glass, since before I could get the water into focus, the lens was again "hazed" over. Before drawing the sheath I carefully wiped the lens, and put on the cap. When ready to expose my friend held the cloth as far over the camera front as possible, and I released the shutter directly after removing the cap, and thus secured a satisfactory record.

Picking up the camera we hastily retreated to a more convenient spot to "pack up," when we found the whole apparatus needed wiping down, while the cloth had to be wrung out and carried in the sun to dry. All around the head of the fall, ferns abounded, revelling in the damp situation.

Mounting past this grand spot, we shortly joined the carriage road winding in a gentle gradient, between heights of impressive grandeur. The lower slopes of the alps were frequently ruddy with numerous kinds of orchis, whilst the more boggy places were white with the nodding plumes of the Cotton Grass. On the rocks which bounded the road-side, the Cobweb House-leek revelled in the fierce sunshine, the grey gauze-like mantle protecting the crowns from being burnt up.

Rounding a steep limestone shoulder, rising abruptly from the roadside, and garnished at its lower extremities with the rich verdure of the Yellow Mountain Saxifrage (*Sax. aizoides*), we obtained our first view of the Rosenlauri glacier, shed from the snowfields of the Wetterhorn beyond, buttressed by the massive Wellhorn on the right, and the gaunt jagged peaks of the Engelhorn on the left.

From this point the scene was delightful in the extreme. A little below us, to the right, the boulder-strewn course of the Reichenbach could be traced winding between wooded spurs, with here and there a picturesque ch  let standing out in rich brown colouring against the green of the pine trees. In the middle distance, fold after fold of the mountains swept down into the valley, each being slightly softer in tone, as it receded from our view-point ; while ever ahead of us, its vast grey bulk almost devoid of snow owing to its steepness, the frowning Wellhorn rose to the sky-line, contrasting strongly with the bluish hue of the glacier, which hugged its side, and at this point descended in a mighty ice-fall, the solid river of congealed water being rent and twisted in a manner resembling half-molten glass.

Mile after mile we tramped along the road, frequently passing rosy patches of that charming little crucifer, *Erinus alpinus*, of a far more brilliant form than I have ever seen in England ; whilst on almost every rock the silvery rosettes of *Sax. aizoon* spread them-

selves, their ruddy stems terminating in a shower of white or pale cream flowers, spotted with crimson.

After resting for a while at the Rosenloui Hotel, whose ample verandahs threw a welcome shade in which we regaled ourselves with refreshment, we started on the final portion of the steep ascent. The track here rose more rapidly than any we had yet traversed; in one place snow-water spread itself over a considerable expanse of hillside, thinly clothed with trees. Here *Caltha palustris*, the Marsh-marigold of our English stream sides, was grouped in thousands, its golden cups just opening to the June sunshine. Never have I seen such a vivid splash of colour—it was like a mirror of burnished gold. Rigging up my camera, I made an exposure, using the twelve times light filter, to secure the brilliancy of the colouring in something like its visual luminosity.

From this point there are two ways to the glacier (now hidden from view by the fir belt)—the first through the wood, the second through the gorge already mentioned, and it was the latter which we decided to take. As in the Aareschlucht, this gorge is quite narrow in some parts, while in others it opens out into vast cavernous places, where twilight perpetually reigns. Through this impressive ravine dashes the stream, leaping over great precipices, and thundering down into the dim cavern-like gap below. Speaking was out of the question, and it was only by means of signs that I made my companion understand that I was

going to make one or two photographs. Here in the faint light, which reached us through the gap in the towering cliffs above, arriving at the exposure was mere guess-work, so I gave one minute with F.16, the result on the rapid plates I was using being quite satisfactory. While this gorge is not nearly so extensive as the Aareschlucht, it is, to my mind, much grander and more impressive.

I was interested to notice that even here every little patch of soil, which caught a chance ray of sunlight falling between the perpendicular cliffs, was occupied by flowers, such as *Globularia nana* or *Soldanella alpina*.

Emerging at length into the open, we regained the goat track we had previously forsaken, though now at a considerably higher elevation, and continued to traverse it for some distance. As we rose, the hillside became more and more broken in character, great masses of stone lying about in all directions; in the crevices of many of these we found fine specimens of the Holly fern. The photograph which appears on page 32 will give some idea of the particularly vigorous character of these plants.

Near to this spot we came upon some immense ant-hills, composed principally of pine needles, frequently three feet or more in height. The amazing activity exhibited by the inhabitants, when we disturbed them, was surprising, accompanied as it was by a curious rustling sound, as thousands upon thousands

of reddish-brown ants scrambled over, or tugged at, the accumulation of dry crackling leaves.

We were now close to the upper limit of the trees, where the dwarf pines, *P. montana*, battled with the elements. In the majority of cases they presented the appearance of wind-driven gorse bushes, rather than trees, though in a few instances good specimens, reaching a height of perhaps fifteen or eighteen feet, were met with. Behind these pines rose the naked, warm grey cliffs of the Engelhorn, apparently devoid of plant life.

Owing to the lateness of the season, we found about here, as on the Mägisalp, large stretches of snow, which in a normal season would have long since been melted. Across these we had to make our way, and the softness and depth of the covering made the last portion of the tramp very fatiguing. On one particular slope the surface of the ground must have been remarkably uneven, though the snow was all of one uniform incline.

Finding that the foremost members of our party were having a difficult time, my companion and I made a slight detour to avoid the bad place, when of a sudden we felt ourselves sinking, and before we could get clear of the spot, we were buried up to our shoulders in a deep drift. Scrambling out as best we could, we soon brushed ourselves down, but found that the snow, which was of a rather moist description, had penetrated all sorts of odd places, and a plentiful supply had silted into our boots. This sort of thing was



"all in the day's march," so we ignored it. It is truly surprising what one cheerfully puts up with when on holiday, actually relishing those incidents which, if they occurred at home, we should be the first to complain of. How perverse is human nature !

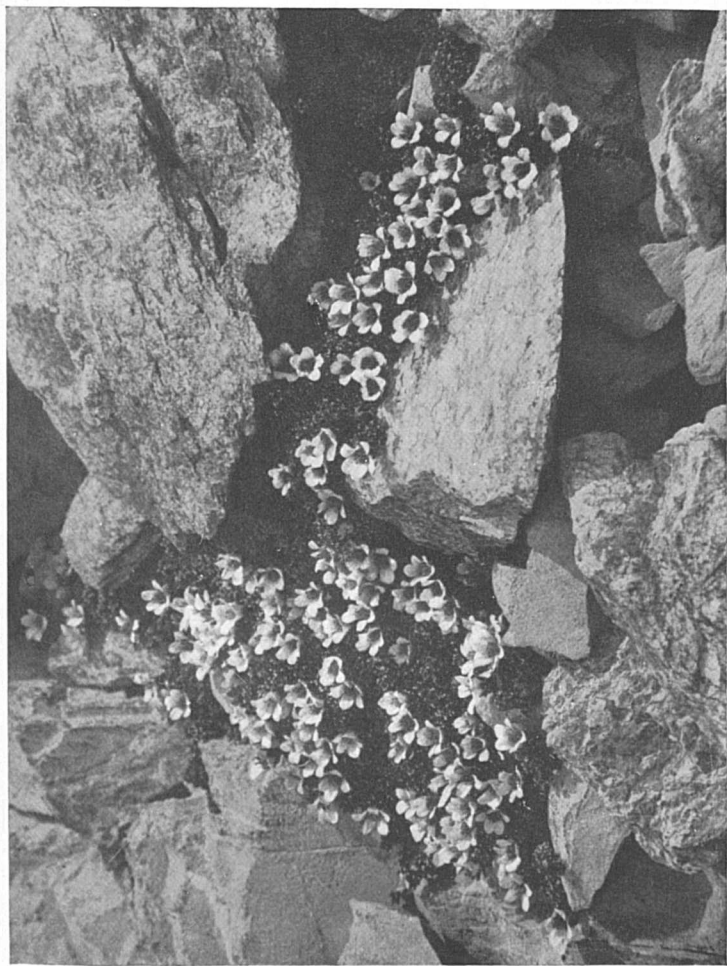
After a mile of hard tramping over the snow, we came in view of the glacier—a most entrancing sight, as its vast masses of crumpled ice, in all sorts of contorted positions, reached the more level snow-field.

It being well past mid-day, we repaired to one of the ledges of the lateral moraine, and did full justice to our lunch, quenching our thirst with the sparkling ice-cold snow-water. Although this is so frequently referred to as harmful, I have never found it so ; if taken in moderate quantities it is most refreshing. Indeed, one of the things which I specially noticed on my return to England was the poor, insipid water we have often to put up with—so different from the cool delicious water of the mountains.

While sprawling at our ease on the shingle slope above referred to, we had a splendid view of the adjacent scenery. Facing us, the notched edge of the Engelhorn cliffs rose high above the snow plateau ; immediately below the glacier, to the left, the incline over which we had toiled was shut in by a slightly higher snow-covered ridge, really a portion of the moraine. Far below us, in the valley we had climbed from, was a tiny white spot, seemingly no larger than a pill-box, denoting the Reichenbach Hotel, with the

rich green, pine-clad mountain rising behind it, this merging later into a sheet of dazzling whiteness, where its snow-covered summit reared itself against the blue sky. The silvery threads, which in several places intersected the pine woods, were in reality swift flowing rills, or snake-like falls, bounding down the steep hillsides to swell the Reichenbach. Immediately above us was the gently rising bank of rock detritus, which, through long periods, had been conveyed to this spot by the ever descending ice-stream, the whole of it sodden with snow-water from the melting snow above.

After lunch we searched the moraine for plants, but found it far from rich. The daintily coloured Alpine Toad-flax (*Linaria alpina*), and the Cushion Pink (*Silene acaulis*) grew freely, and in several places fine examples of the Purple Rockfoil (*Saxafraga oppositifolia*) made glorious hummocks of colour; so plentifully were the flowers strewn upon the dark green mats of foliage, that the latter almost disappeared from view. The reproduction opposite shows this plant in a typical situation, and illustrates the immense profusion of its flowers. Search as we might, however, not a trace could we find of the Glacier Buttercup. We then learnt from Canon Horsley that the place where it was chiefly found was still covered by the late snowfall, over which we had traversed. Keenly disappointed at our want of success, we spent some time round the snout of the glacier examining a few crevasses. While



THE PURPLE ROCKFOIL (*SAXIFRAGA OPPOSITIFOLIA*).



thus engaged, a report like a thunder clap, quickly followed by a second, caused us to look up at the glacier, just in time to see an enormous avalanche descending half a mile away. The sight was most impressive—the mass of snow and ice being so vast as to appear to move quite leisurely; a huge cloud of snow particles rapidly followed the fall, remaining visible for some moments.

The amount of material dislodged in one of these avalanches, which are very frequent in the summer during the afternoon, is almost beyond belief, although the distance from which they are usually observed causes them at times to appear quite small.

We made the descent from the glacier along much the same track as that by which we had mounted, skirting the beautiful gorge we had previously explored. Soon after leaving the snow I noticed, on a turfey shoulder rising from the alpside, a patch of blue, and on near inspection this proved to be *Globularia nudicaulis*, a large and coarse relative of the *G. nana* we had found near Meyringen. Here it grew profusely, mantling the ground with its foliage, and throwing up its drumstick-like flowers in myriads. Near to an outlying tongue of snow the fragile blossoms of *Crocus vernus* pierced the sodden ground in just the same profusion as near the Mägisalp, while the dainty Soldanellas kept them company. A little below these plants, a beautiful display of the choice white Mountain Buttercup, known as *Ranunculus alpestris*, came into view. Whole

stretches of the steeply inclined alpside were here white with it, reminding one, where they lay thickest in the hollows of the folding ground, of snow-drifts. The dainty, divided leaves, cut into three lobes, are of a particularly glossy green, while the beautifully moulded flowers of dazzling whiteness are rendered still more conspicuous by the cluster of bright yellow stamens in their centre.

After re-passing the Rosenlauri Hotel, we continued along the high valley, through which the Reichenbach flows, and in places this offered us river moraines of considerable extent. Knowing that treasures from the highest ridges often find their way down to such positions, we carefully explored these expanses of water-worn boulders, in the hope of coming upon a stray plant or two of the Glacier Buttercup, in the search for which we had been disappointed, near the glacier—but no, there was not a sign of it. However, we found another high mountaineer in *Thalaspis rotundifolia*, a tiny plant with a pink four-petalled flower, rarely seen below 8,000 feet elevation. Evidently it must have been brought to this comparatively low place (about 3,500 feet) by some rill feeding the Reichenbach. Here, too, *Linaria alpina* mantled the pebbles in glorious patches, while *Sax. aizoides* grew in rich green hummocks by the water-side.

Before reaching the great fall of the Reichenbach, we turned off over the alp which bears the same name—a curious outlying mass of rock, forming quite a feature

in the landscape from the Hasliberg—and descending a narrow path which zigzags down its face we soon came in sight of Meyringen. Quite a number of Orchis, including the Bee and Butterfly, were growing in profusion here.

Particularly quiet and peaceful our little village looked, lying in the valley at our feet, with the evening sun falling aslant over the mountains on to the châteaux with their quaint overhanging eaves.

Upon arrival at our hotel, we carefully sorted out our collected treasures, and packed them in biscuit tins, ready for posting home on the morrow. After dinner we enjoyed some music which the local Choral Society kindly provided for our entertainment.

Needless to say, the vigorous exercise of each day in the deliciously pure air of the mountains ensured slumber of the most refreshing kind, and, even after the most fatiguing tramps, we rose the following morning fresh and keen, anxious to be on the war-path with as little delay as possible.

## CHAPTER IV

### BRIENZ

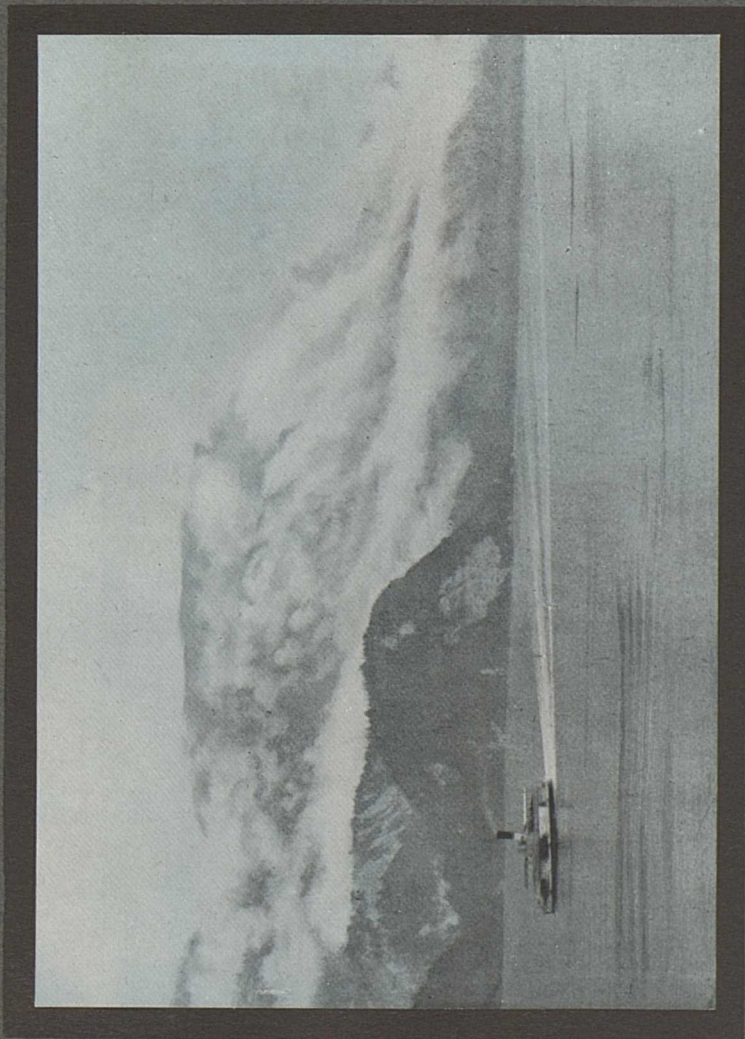
BRIENZ is a delightful old-world village, situated eight miles to the west of Meyringen, on the shore of Lake Brienz; it is to a large extent a replica of what Meyringen was prior to the great fire in 1891. Wishing to see this place and secure photographs of its quaint wooden châteaux, we set out one morning, under the impression that a walk along the good level road, which ran down our valley, parallel to the river Aare, would be a more pleasant method of reaching the lake than going by train.

Alas! having been up in the mountains for some days, near to the snow-line, we had under-estimated the vigour of the sun down in the valley, and before we had covered the first four miles we were almost roasted. Never had a road seemed so long and dusty, despite the beautiful flower-strewn meadows on either hand. The high mountain walls, bounding the valley on each side, effectually cut off any gentle zephyrs there were higher up.

By the time the lake came into view, we were hot and covered with dust from head to foot. The refreshing air off the water, however, soon revived us, but







VIEW FROM LANDING STAGE, BRIENZ.

we had learnt our lesson, and never again did I venture along the Brienz road for more than a mile or two.

The village of Brienz consists of a main street, with a few short by-lanes, leading to and from the shore of the beautiful lake. In many places the lake-side is not built upon, and here trees are trained so as to throw a shade upon the path, making a very pleasant promenade in hot weather.

The view across the lake was delightful, the deep blue water acting as a pleasant foil to the wooded slopes of the mountain on the opposite shore. The higher summits were hidden in the soft drapery of the clouds, which so frequently hang at a definite level around the hills bordering the lake.

For some considerable distance beyond the point where the swift-flowing Aare pours into the lake, the water is often a sombre brown, due to the vegetable matter and fine stone particles which are constantly being brought down by the river. The lake, which is nine miles long and one-and-a-half wide, is believed to be in places from 500 to 850 feet in depth.

The most important part of the village is the quay, from which the small steamers, plying upon the lake, take their departure. The view from the landing-stage is extremely fine, as may be gathered, to some extent, from the reproduction of my photograph opposite. The wood of which the *châlets* are built is here, as elsewhere, of a particularly rich brown colour. Some of these timber houses are of large size, many

of them have a balcony running along the whole of one and sometimes two sides, immediately under the overhanging eaves. Presumably it is possible to get on to the balcony for exercise during the winter, when the ground is covered to a considerable depth with snow. The carving on some of the *châlets* is decidedly effective, while not infrequently the fronts are decorated with the horns of the Bouquetin or Ibex, now becoming increasingly rare in the mountains.

The quaint little church is situated on a steep mound, rising abruptly from the lake shore, and from the churchyard an extensive view on every side is obtained. Brienz is one of the centres of the wood-carving industry and possesses a school for instruction in the art. Here the young people are taught to fashion the rough timber into bears, eagles, and chamois, besides a host of smaller articles, and certainly the goods exposed for sale are in many cases very skilfully made.

The small rowing boats used by the fishermen are extremely quaint objects, suggesting that they had, once upon a time, been of larger size, but for some reason had been cut into halves and a board nailed across the end of each portion, the stern being quite square, just where the greatest breadth of beam is reached!

At the end of the main street furthest from the quay there is a particularly quaint alley and here are a number of delightful old *châlets*. The ground floor of each is of stone, but the rest of the structure is of

timber, black, or rich bronze with age. The staircase is outside the house and is sheltered by the overhanging balcony, which in these examples goes round at least two sides of it. The illustration on page 48 gives a good idea of the street, and shows on the right-hand side the remains of the winter's fuel supply stacked up in front of the house. These wood stacks are much in evidence all about Meyringen, and by the autumn reach to the eaves, not infrequently being built out into semi-circular forms, looking much like a row of forts in front of the houses !

From Brienz we took steamer to Interlaken, calling at many points along the lake *en route*. First we touched at a place almost opposite, called the Giessbach. Here, by means of seven beautiful cascades, the water of a mountain stream, rising on the slopes of the Schwarzhorn, finds its way to the lake. The last fall is magnificent, and at the time of our visit was particularly imposing, owing to a copious supply of water from the melting snow.

At certain seasons wood is cut high on the mountain side. After being sawn into logs of certain length, it is toppled over into the Giessbach, which, without further trouble on the part of the woodman, conveys it to a spot just above the lowest fall, where a net-like arrangement prevents it falling into the lake. It is curious to see the logs jumping the various cascades, giving the impression of huge salmon leaping from the foaming water. At certain times the gate of the

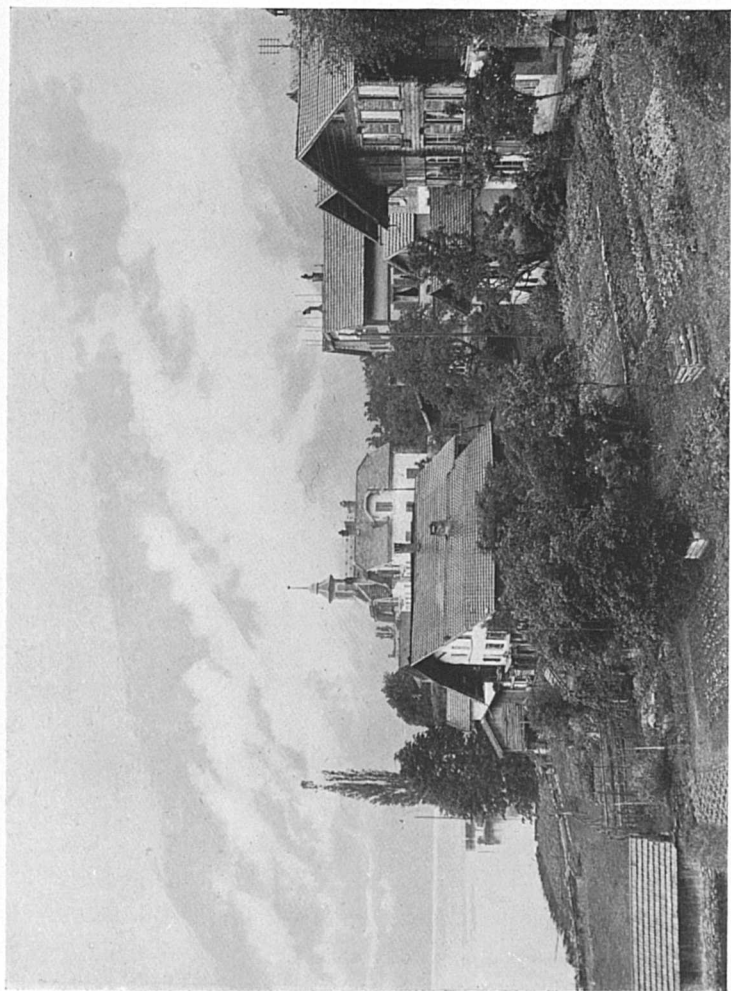
“pool,” in which these logs are collected, is opened, when, with a rush, the timber shoots out into the lake, soon to be collected into rafts and towed to various points along the shore.

High above the place where this beautiful fall thunders into the blue waters of Brienz, and at an altitude of 5,000 feet, is a beautiful lake, encircled with mountains, and known as the Hinterburg See. At the time of my visit in June this was still more than half covered with ice, looking strangely cold and wintery.

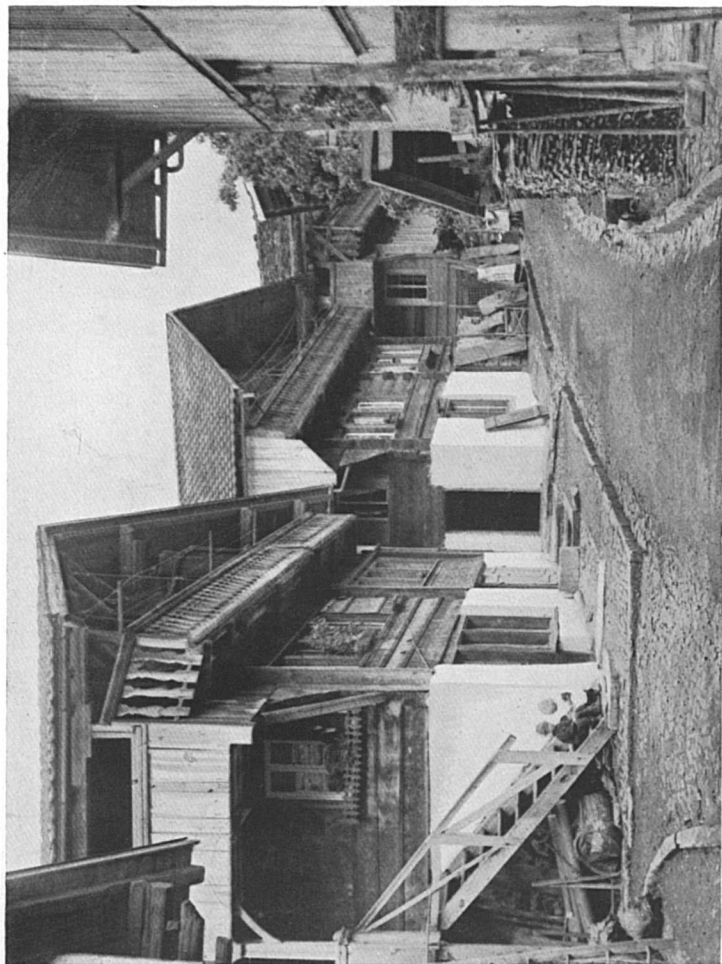
The path from the Giessbach to the Hinterburg See is a particularly tiring one, being a continuous zig-zag over cobbly stones, which jolt one almost to pieces, especially on the downward journey.

From the Giessbach the steamer plied first to one side of the lake and then to the other, giving us constantly changing views across, and along its length. Finally the low shore of Interlaken appeared ahead, and making a wide sweep so as to enter the river, the boat came to rest at the pier.

Interlaken, with its palatial hotels and outward signs of civilization, is in striking contrast to the queer old-world villages we had been wandering through. The town is situated on a level spot of ground, dividing the Lake of Brienz from the Lake of Thun, through which curves the river Aare. It is pre-eminently a pleasure-resort, being frequented by many visitors on account of its delightful climate. The



THE VILLAGE OF BRIENZ.



CHÂLETS IN BRIENZ.  
(See page 47.)



temperature is said to be surprisingly equable, though personally I found it uncomfortably hot. Doubtless at some remote time one sheet of water occupied the site of the two lakes, which have since been separated by the accumulation of detritus, brought down from the Grindelwald and Lauterbrunnen valleys; it is its position "between the lakes" which gave Interlaken its name.

The view of the snow-covered Jungfrau, from the main street, along which runs an arcading of walnut trees, is magnificent; by the aid of the new railway the summit of this mountain will be attainable with the minimum of exertion.

From Interlaken we took steamer to Thun, again passing lake scenery of the most beautiful description. Thun is an old-fashioned town, noted for the "Thun ware," or local pottery. The principal street is curious, inasmuch as the footpath runs over the flat roofs of warehouses, which project in front of the buildings. This town is one of the Swiss military depôts, and manœuvres take place on the Common. Beautiful views are obtained to the south-west over the valley of the Aare towards the Stockhorn chain.

An alternative route from Interlaken is by the north bank of the Lake of Brienz, through Goldwyl and Ringgenberg, a delightful walk of twelve miles, offering beautiful peeps across the lake to the opposite mountains. Along this route many interesting lowland plants may be collected, and the rich flora is a great

attraction to thousands of gaily-coloured butterflies which disport themselves in the sunshine.

From Brienz we took train to Meyringen, only a few minutes' run, reaching that place in time to call at one of the many cafés known to our party as "Madam's," where, in the pretty garden, we regaled ourselves with coffee and strawberry tarts, the latter a very favourite dish, made from the wild strawberries of the locality. Then home to the Sauvage to dinner and another pleasant evening.

## CHAPTER V

### HANDEGG

To all lovers of alpine gardens, the encrusted Saxifrages have a charm which it is hard to resist. They are equally beautiful in summer and in winter, for in the latter season the hoar frost flakes their leaves with glistening whiteness, and makes them shine in the sun as though bedecked with jewels. In the European Alps a vast number of species occur, including the two giants, *Saxifraga longifolia* in the Pyrenees and *Saxifraga pyramidalis* in the Oberland. We learnt that the latter plant grew in abundance on the steep limestone cliffs, along the road to the Grimsel Pass, near Guttannen. As the distance was considerable, we decided to travel a part of the way by carriage, so as to reach the scene of operations as fresh as possible. An excellent carriage road crosses the Kirchet, or rocky barrier through which the river Aare has cut the famous gorge, and traverses thence the level valley past Innertkirchen or Im Hof. This route skirts the beauties of the Aareschlucht, referred to in a previous chapter. The ground upon which the quaint village of Innertkirchen (meaning the inner church) is built is remarkably flat, being doubtless an old lake bottom.

Mountains rise up on all sides and completely shut it in, while the river twists and turns between the inter-lapping hills so as to be quickly lost to sight.

On this particular morning we left our hotel soon after 7 a.m. The mountain barrier to the eastward threw weird grey shadows across the meadows, while the opposite side of the valley was brilliantly flooded with sunlight. The road mounted steadily, and at every turn gave us some fresh glimpse of the beautiful mountain scenery through which we were driving.

Soon after passing Im Hof, the country assumed a wilder character, and though the meadows were still gaily sheeted with the all-pervading campanula, and a multitude of other such sub-alpine plants, the rocky walls rising steeply on either hand, showed many scars, where the devastating action of the frost was plainly visible. The pines, too, now become intermittent, and somewhat dwarfed, as though they resented the rough conditions to which they were exposed.

At a sharp turn of the road, where, as in many places, it was hewn or blasted out of the steep mountain side, so as to appear in the distance merely as a scratch or ledge, we came upon a vast accumulation of snow. Evidently the mountains around this place were so shaped as to cause the bulk of the snow which fell upon them to be precipitated towards their base, as down a funnel, and the road happening to pass this spot, was completely covered for a hundred yards or more to a depth of twenty or thirty feet. To enable the traffic

to pass, this avalanche had been tunnelled, and it was interesting to notice the difference as we entered it, from the blazing sunshine out in the open, to the intense cold of the dark, snow-encircled tube. Every moment chilly globules of water would drop from the roof into the numerous pools which covered the floor, or more frequently, it appeared, landed neatly at the junction of one's neck and collar, whence they trickled icily down our backs. When we emerged from the burrow, the sunlight appeared absolutely blinding in its intensity, reflected as it was by the myriad facets of the surrounding snow surface. It struck me as curious to see such an enormous mass of snow, lying at this comparatively low elevation, with the fierce heat of the June sunshine pouring down upon it, with apparently little effect. Doubtless it was melting rapidly the whole time, but the water seemed to find its way between the snow particles, and so the thaw was not very apparent. We learnt that this avalanche is more or less constant at this point, shrinking considerably some seasons, but rarely, if ever, entirely disappearing.

Where the road was more than usually steep, we took the opportunity of walking, and this gave us a chance to search for flowers. On the moist, sloping banks, we found many examples of *Thalictrum aquilegifolium*, a most graceful Meadow Rue, with deeply-cut, columbine-like leaves, and large trusses of white, or pink-flushed blossoms. Near by, colonies of the Turk's Cap Lily were just unfurling their flower buds.

Among the wet grass through which these plants grew we noticed immense numbers of the buff-coloured Roman, or edible snail (*Helix pomatia*), many of great size. I should imagine that they would find a particularly happy hunting ground in our alpine gardens here in England, judging by the healthy appetites they exhibited on those banks.

We now came upon the first plants of the great Saxifrage, for which we had especially made this excursion. Along a large portion of this route the road, as I have already mentioned, had been hewn out of the mountain side. Here, where the rocky wall was especially steep, the limestone cliffs rose sheer above us on the one hand, and on the other fell away at an angle of seventy degrees below us to the roaring foam-flecked torrent at their base. At the lower portion of the steep face, which towered above us some hundred feet or more, and just where water oozed out of it into the roadway, large masses of *Sax. aizoides*, the Yellow Mountain Rockfoil, spread their rich foliage, almost every growth of which was terminated with a cluster of flower-buds, soon to open and crown the whole with a mantle of tawny yellow.

Above those plants a few solitary rosettes of *Sax. pyramidalis* came into view, and before we had travelled many yards the whole cliff-side, from twenty or thirty feet above the road level, was sheeted with the huge waving plumes of this glorious flower. The positions chiefly favoured were in chinks of the stone face, where



THE ALPINE MEADOW-RUE (*THALICTRUM AQUILEGIFOLIUM*).  
(See page 53.)





the merest crevice appeared large enough to admit the fine hair-like roots. In other places, soft or rotten spots in the rock, where leafy humus had accumulated, provided a situation in which half-a-dozen large rosettes could nestle, each, or all of them surrounded by a group of babies, or off-sets, attached to the parent by a strong ligature.

Here in this exposed position, the lime scales bordering the margin of each leaf, which are such a characteristic feature of the encrusted saxifrages, were brilliantly white, while the flower-spikes, often fourteen or eighteen inches long, were composed of myriads of white flowers spotted with crimson.

In such profusion did this rockfoil grow, that for half a mile the upper part of this cliff was white with them, thousands upon thousands of flower spikes, all swaying gracefully in the morning breeze. While delightful to look up at, the situation was anything but a happy one in which to photograph them, so we prospected along the steep rock wall which fell away on the opposite side to the river below. Here the plants did not grow so thickly, but after some searching I found one place where half a dozen sprays promised to make a fair photograph, if only I could get near enough to them. With some amount of trouble I managed to scramble along the rock face, under the parapet which guards the edge of the road, and found, on a slightly less inclined portion, a position whereon it appeared just possible to erect the camera stand.

After much manœuvering, I succeeded in focussing the plants and in due course made an exposure. As one of the group was a particularly fine specimen, and this place somewhat out of the direct line of the wind, which though slight, was enough to keep most of the plumes gently moving, I decided to make a large scale negative of this plant. Inserting my long focus lense, I adjusted this fine example on the plate, getting a splendid representation of it on the ground glass. When ready to "stop" down, I found, owing to the extension of the camera being so great, that, from my very insecure position I could only just reach the metal ring which controlled the stops, and wondered how I was to take the cap off when ready to make the exposure. There was not the slightest possibility of getting even half a step nearer, as I was already perched at the extreme end of a rough ledge, which here ran a few feet along the cliff-side, and then stopped abruptly. After some trouble, I found that by hanging outward from the end of my companion's alpenstock, which he held towards me from the parapet above, I could just reach the lens cap; so after one or two "trial shots," I made an exposure, hoping to secure a specially good result. Judge of my disgust, when, upon developing that plate, it proved quite blank. Evidently I had been so absorbed in how I was to make the exposure that I had quite overlooked the matter of drawing the shutter of the dark-slide. Other photographers will, I am sure, appre-

ciate the meekness of spirit which comes over one at such a time.

Having completed the portraying of these beautiful plants (satisfactorily as I fondly hoped!) we removed a number of the smaller crowns, and packed them in our collecting sack, and these have made themselves much at home in my garden, planted in a semi-vertical position, much as we found them growing on the cliffs along the Handegg road, and each spring they give me a display of arching plumes of blossom.

Feeling that the morning was rapidly slipping away, and since we were so far on the road, we had better see the famous falls at Handegg—said to be the third finest in Europe—we reluctantly said good-bye to the Saxifrage-encrusted cliffs, and resumed our walk, having left the carriage below this point to await our return.

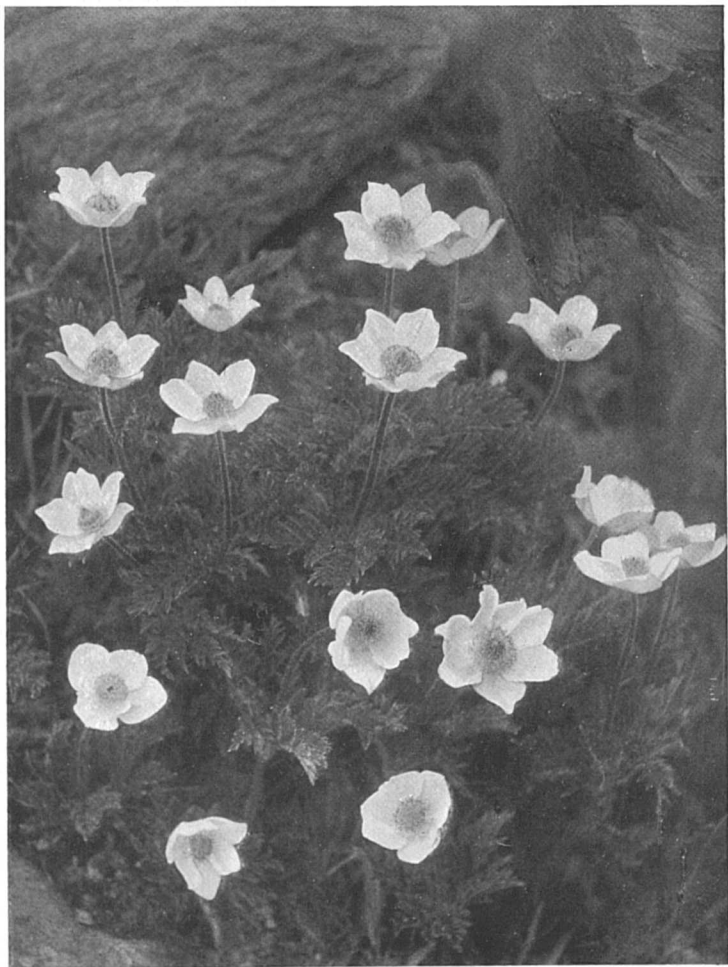
Before very long the right hand side of the road was bounded by rocky ground, and growing in the interstices of the stones were splendid specimens of the Parsley Fern *Allosorus crispus*. For a considerable distance this fern garnished the bank, looking much finer than I had ever seen it in England. Here in this exposed stony situation the pale green colour of the fronds arranged in tufts, caused it to appear a very elegant little plant, by no means unlike a tuft of parsley at first sight. In the lowland garden it appears rather an uncertain subject, and certainly demands the most rapid drainage. My success, hitherto, having

been very moderate indeed, I am now growing it in the moraine, and it would seem, so far, to find the conditions existing there particularly acceptable.

Some time before we came in sight of the Handegg Fall, the thunder of the water made us aware of its proximity. Here the river Aare, which rises among the eternal snows of the Finsteraarhorn, is joined by the sparkling water of the Aarlenbach, and plunges 250 feet into the abyss below.

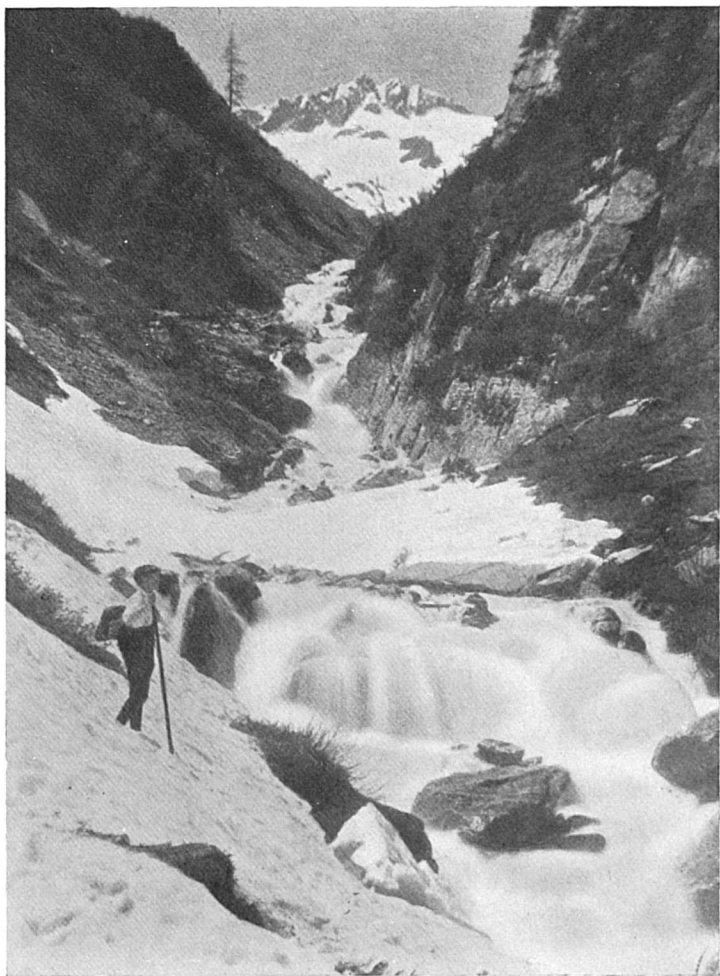
It is difficult adequately to describe the impressiveness and grandeur of the scene, with the steep cliffs rising abruptly from the ravine, which centuries of water action has cut deep into the rocky ground. So precipitous is the mountain side at this point, that the roadway has been tunnelled through it, and the deep shade thrown by this archway made it a particularly welcome vantage point from which to enjoy the magnificence of the view ; it was likewise a cool retreat from the hot and dusty road along which we had been travelling.

We made several photographs, and then continued our way till the small hotel at Handegg came into view. This hotel is built on the lower slope of a small alp. Near by, the short turf was jewelled with soldanellas, pinguiculas, and a host of other plants that flourish in these high pastures. So interesting was the locality that we decided to abandon the road to the Grimsel Pass, from which a fine view of the Rhône glacier is obtainable, and turned off on this side to



THE YELLOW MOUNTAIN ANEMONE (*A. SULPHUREA*).

(See page 59.)



MOUNTAIN STREAM ABOVE HANDEGG.

(See page 59.)

explore and photograph. For some little distance the alp was comparatively level, and it was astonishing to note the profusion of brilliant flowers which carpeted the turf.

To the west, the pine-clad walls closed in again, and down a steep gully, still heavily covered with snow, roared and tumbled a mountain stream, in some places burrowing out of sight beneath the snow, only to reappear in greater volume lower down. Seeing a likely place for rarer plants about half-way up this gorge, we crossed the snow, keeping close to the stream. Perhaps the illustration on opposite page will give some idea of the aspect of this spot, where the foaming snow-water tumbled over dark-coloured stones, while above, the pine trees struggled for a meagre existence on the steep face of the cliff. Upon reaching the dark stony ground beyond the snow to the left of the picture, we mounted for some ten minutes, and then suddenly came upon quantities of the yellow anemone of the Alps (*A. sulphurea*). Never having met with it before, we deemed it a great prize, and forthwith proceeded to collect some of the plants. This, however, proved no easy matter, for the ground resembled a macadam road, with the merest trace of vegetable humus between the stone rubble. Though provided with a strong trowel, it needed considerable exertion to make a hole twelve inches deep, and then only to find that the brown woody root-stock still continued to descend—as though going on for ever. After half-an-hour's really hard

work we managed to extricate about six plants, but none of them very satisfactorily. It seemed that dynamite would be the only sure means of reaching their base, unless we could find small plants of one year old. To determine such was equally difficult ; several times we started work on what appeared to be a baby plant, only to find that it dived and delved into the rocky ground, just as cheerfully as its larger neighbours.

We eventually gave it up as hopeless, a decision which further acquaintance with the plants has only strengthened,\* and moved on to where the rocks showed rosy streaks and patches, due to colonies of *Primula viscosa*. We knew this to be an all-round, good-tempered plant—attractive in appearance—easy to collect, and taking kindly to cultivation in our English gardens. Here it grew in great “ mats,” both in the rubbly soil of the alpside, and in crevices between the stones, frequently hanging half-pendent in fan-shaped masses over the rocks.

After making a few photographs of the primulas and the anemones, we started downwards towards the roadway. Thinking to make a short cut by following what appeared to be a track, we soon found ourselves on the edge of a promontory some fifteen or twenty feet above the green alp, which we had crossed earlier in the afternoon. As the sides of this hummock

\* These anemones can be easily raised from seed in this country, though they are slow in coming to maturity.



were almost perpendicular, and fringed with tough scrub, we thought it best to retrace our steps, so as to regain our original route. Having crossed the open alpside for some distance, while collecting the anemones and primulas, we found that we had become thoroughly uncertain of our whereabouts, and once more found ourselves at the edge of the steep bluff. As it was getting late, we now decided to scramble down the rocks as best we could. Finding a somewhat gutter-shaped groove at one part of the knoll, though still at an angle of about eighty degrees, we threw down the collecting sack, and my companion, who was considerably taller than I, made the first descent—holding on to the tough branches of the alpenrose bushes as far as they would serve and sliding down the rest of the way, reaching the turf in anything but a picturesque attitude, though quite unharmed. Before following, I threw down to him the camera case, so as to avoid any damage to the fragile contents, which might have put an end to further negative making.

Almost before I had let go of the scrub, I found myself bouncing over the grassy alpside at the base of the bluff—an accumulation of detritus at the bottom of the rocks having formed an incline, which caused me to shoot along the ground, instead of coming to rest. Luckily the turf was free from stones, and except for a slight shaking I was none the worse. Girding on our packages, we proceeded to the Handegg Hotel,

where a few minutes' rest and some tea made us feel quite fresh.

Taking to the road once more, we repassed the beautiful falls, and then on to our waiting carriage. Just as the sun dipped over the western mountain flanks we passed the Saxifrage cliffs, and looking up at the cold, grey rocks, we saw the countless spikes of flowers nodding at us, the higher ones still catching the rays of the setting sun.

Rarely do I notice the Pyramidal Saxifrages flowering in my garden, but in my mind's eye I see the waving of innumerable white plumes on their native cliffs as I recall the pleasures of the day's excursion to Handegg.

## CHAPTER VI

### THE GUMMENALP

ONE of the many beautiful forms of the Alpine anemone which I had been trying to grow in my Essex garden, with but little success, was the shaggy wind-flower, *A. vernalis*. This diminutive plant is by no means an easy one to establish in our lowland gardens, owing to the usually sodden state of the ground in our winters, and it is a rare sight to see a flourishing colony far from its alpine home.

Though it is widely distributed throughout Switzerland, it occurs but locally, but where found it is generally in large colonies. When arranging this Swiss trip, I was particularly anxious to make its acquaintance. Throughout our many pleasant rambles, as already described, I had not seen a single specimen, so it was with considerable pleasure that I learnt from one of the inhabitants of Meyringen, that a man named Herr Blatter, living at Iseltwalden, and known locally as the botanist, frequently collected numbers of the blossoms for pressing—afterwards arranging them with other mountain flowers, similarly preserved, on cards, for sale in the shops. We called upon this gentleman one evening, to try and

secure his guidance, and found that while we knew practically no German, he was quite unfamiliar with English, beyond the word "London." It will be readily understood that the "conversation" which followed was highly amusing, and gesticulative. However, by the aid of an illustrated botanical book, we eventually made him understand what it was we wished to find. He then showed us many pressed specimens, and agreed to meet us the following morning at 7 a.m. for a five hours' tramp, to a place called the Gummenalp, a pasture at an elevation of just over 7,000 feet. We bade him "Guten Abend," and retired early, so as to be well rested for the strenuous day on the morrow.

Fortunately the morning broke gloriously fine; indeed, the weather had so far been most kind to us, rendering our waterproofs quite unnecessary, and it was in keen anticipation of a delightful day that we strode over the dewy valley, and up the steep zigzags bordering the alpbach to the Hasliberg. The air was deliciously cool at that hour, and we had become so fit by our constant practice, that the path, steep though it was, was negotiated without a pause.

At intervals through the trees at each turn of the zig-zags, we caught glimpses of the snowy Wetterhorn group, and when we emerged on to the more open ramparts of the Hasliberg, the view across the valley to the Reichenbach alp and the adjacent fall, with the Engelhorn and the Wetterhorn in the distance, was superb. (See opposite.) Beyond the murmur

REMBRANDT GRAVURE



THE WETTERHORN GROUP FROM THE HASLBERG



of a streamlet, which gambolled down the hillside close by, not a sound was to be heard, not even the all-pervading cow-bells which usually tinkle throughout the day ; and the charm and fascination of this beautiful spot threatened to delay our arrival at the chief scene of our desires. As on the many previous rambles, we were surrounded on every hand by flowers of the most conspicuous beauty, though we had grown so accustomed to them by now, that they did not delay us to the same extent as during our first few days in the mountains.

As we approached the upper edge of the fir belt, the daintily fringed lilac bells of *Soldanella alpina* danced in every passing breeze, while near by, the round notched leaves of *Sax. rotundifolia* were displayed in fresh green tufts, and from their heart the slender flower spikes, not unlike pale-coloured London-pride plumes, were fast emerging. Needless to say the camera came into play on many occasions, despite the pantomimic protestations from our guide, that if we delayed we should be almost roasted before we reached our destination, owing to the rapid way the sun was climbing through the blue vault towards the zenith.

Before long we caught our first glimpse of the Gummenalp, a curious and solitary mountain, projected high above the grassy slopes. The face, which was towards us, was covered with short turf, and at so steep an angle, that, as we afterwards found, we were obliged to negotiate it on all fours ; the baking

sunshine of the previous week having made the grass almost as slippery as ice. The opposite side was almost perpendicular, as though it had at some time been split down, and there it dropped 2,000 feet to a silent valley beneath.

Just before the last steep rise we came to a few weather-beaten *châlets*, which, later in the season, are used by the cattle and their attendants, while near by was a deliciously cool stream of snow-water running out from the rocky ground. Here we decided to halt for lunch, so as to fortify ourselves for the final assault.

Taking this opportunity, and the shade cast by the *châlets*, we re-charged our dark-slides, and when this operation was over we found that Herr Blatter had gathered pieces of dry wood and kindled a fire, upon which he was heating water, so that we might be refreshed with coffee. The old man was as happy as a sand-boy at the surprise and pleasure we evinced, having kept this treat quite dark till the actual moment of preparation. Our delight was somewhat tempered however, when we tasted the beverage, though we did not allow this to appear. There was, of course, no milk or sugar (both necessary items for my taste), but he had, I think, made up these deficiencies with an extra dose of coffee. When I think of the *Gummenalp*, I can, even after this lapse of time, taste that strong rough liquid, as I swallowed it, evincing to the utmost of my power a pleased smile of satisfaction meanwhile.







PREPARING COFFEE ON THE GUMMENALP.

It was surprising to note, despite the intense heat of the sun at this altitude, which liberally blistered our skin, how chilly it was in the shade of the châteaux—where we had found a comfortable log on which to rest while taking our lunch—so much so that we thought it best to return to the south of the building, rather than run the risk of a chill, due to the icy air.

The scenery about here was indeed beautiful, with snowy mountains all around us, Meyringen, almost directly beneath us, being hidden, owing to the steepness of the ground over which we had travelled. The illustration opposite may serve to indicate the beauty of the spot, and show our *al fresco* lunch being consumed.

While seated on this silent alpside, we were favoured by the sight of a magnificent Golden Eagle (*Le Roi des Alpes*) soaring majestically among the clouds. These great birds are becoming increasingly rare, owing to their being treated as vermin, and shot on sight; the Faulhorn range, however, is said to be still a favourite resort with them.

Resuming our tramp, we soon began the last long pull, and here the choicer plants began to delight us. At this elevation, a little over 6,000 feet, the snow-bells we had become so accustomed to, gave place to the more tubular variety, known as *Soldanella pusilla*, an even more dainty little flower than the almost universal type. The blossoms are more pendent, and much less definitely fringed, rarely more than two on a stem, and

often rather lighter in shade, though this may be a local characteristic only. The plants we collected have since flowered in my garden although near to London Soldanellas do not take very kindly to the smoky atmosphere.

The pearly white, glistening cups of the Alpine Buttercup, *Ran. alpestris*, spread in sheets over the sloping ground, the deeply divided leaves growing so numerous as to obliterate the grass. Still further up, rosy patches came into view, and these proved to be glorious hummocks of *Silene acaulis*, so thickly flowered as to disguise the coral-like cushion of deep-green foliage which clustered round every protruding stone. What a contrast these pink stretches were to the poorly-flowered, invalid specimens of this charming cushion pink we often see in England! My fingers itched to transfer one of these clustering hillocks to my garden, but the impossibility of removing an established plant is well known, and my experience amply confirms its deep-rooting tendencies.

Now that we were within a few yards of the highest ridge of the alp, having seen nothing so far of the choice Anemone we had made the journey specially to collect, we were beginning to feel rather anxious, and wondered whether, after all, our guide had made some error. We were not allowed long to reflect on this horrible possibility, however, for soon we were scrambling over a slippery alpside which was one carpet of a hard wiry growth, covered with wee pink

flowers ; in fact, we were ruthlessly trampling under-foot the choice little mountain shrub, *Azalea procumbens*. Having known this only as a particularly ill-tempered plant, which generally refused to make itself at home in my garden, despite every attention, I hardly recognised it when growing in these glorious stretches of bronzy foliage and pink flowers. Unfortunately the root system appeared to equal, if indeed not to rival, that of the *Silene*, and collecting it was almost an impossibility.

With all these joys of the high alp to detain us, we did not progress very rapidly, and our guide appeared to wonder what we saw in these other little plants when we were so near to the long-sought-for shaggy *Anemones*.

Having made several photographs, a by no means easy matter on the steeply sloping alpside, we scrambled over the remaining bank, and found ourselves on a comparatively level plateau, of some seven or eight acres in extent. Hardly had we realized that we were at last at the end of our arduous labours, when both my companion and myself gave vent to a yell of delight, for, there at our feet, and dotted all over the surface of the sun-baked turf, were countless thousands of the *Anemones* we had set out to find. The wonderful profusion of the exquisite blossoms, rising scarcely one-and-a-half to two inches from the ground, in colour white, flushed with pink, and shaded with a delicate, amethyst iridescence, quite overcame us,

and we sat about on the ground glorying in their beauty. Some of the older flowers had reclosed their petals, apparently after pollination, and the characteristic calyces, surfaced with rich, bronzy golden fur, were fully displayed, while the flowers, which when open are held erect, reminding one somewhat of a crocus, were now hanging pendent on the elongated stalks. It was interesting to note that even at this elevation innumerable small black ants were running about among the clustered stamens, in the centre of each open cup; probably they play no small part in the work of pollination, since even though the day was brilliant we saw no butterflies.

Having gloated over these treasures for a considerable time, we proceeded to make a few photographs of them, selecting somewhat isolated groups, as making more satisfactory pictures, than where the blossoms were overcrowded. The illustration opposite gives a very good idea of these beautiful windflowers, though the absence of colour in the monochrome reproduction detracts considerably from their real charm.

As the afternoon was now well advanced we were compelled to think of our return journey, which, though down hill all the way, was of considerable length. Before leaving this delightful spot, however, we collected, as carefully as possible, a number of the smaller plants of the Anemone and packed them into our rucksack. These eventually found their way to London, and some are now thriving well in my garden, planted in a



ANEMONE VERNALIS AFTER POLLINATION.





very gritty compost, and at the moment of writing several furry buds are peeping from the centres of these plants.

On the outlying craggy portions of the alp, just on the edge of the eastern precipice, numerous clusters of the yellow crucifer, *Draba aizoides*, gloried in the sunshine, while near to these, growing in the merest trace of soil, were several minute forms of the silvery *Sax. aizoon*, which I find have not materially increased in size now that they are growing in my garden. This is interesting, as their compactness appeared due to the starvation treatment vouchsafed to them on the sun-baked rocks.

The panorama which was spread out on every side of us from this elevated point, and which I fear we had rather ignored while revelling in the display of the Anemones, was magnificent. No matter which way we turned, glittering snow-clad mountains, rising one behind another, met our gaze, while in the immediate foreground the grassy knoll of the Gummenalp dropped abruptly to the quiet valley from which we had made the ascent. The photograph reproduced on page 72, one of many I took from that high vantage point, gives, perhaps, the best rendering of the magnificence of the scenery, and if the reader can in imagination introduce the yellowish-green of the sun-baked turf into the foreground—the bronze green of the pine-clad slopes, rising from the opposite side of the valley, with their glittering mantle of snow at

the summits—while over the whole the intense blue of the sky, streaked and billowed with glorious masses of wind-drawn cumulus, a fair idea will have been obtained of the scene which fascinated us that beautiful June afternoon.

Heeding at last the visible impatience of our guide, we picked up our traps and trudged over to a snow slope several hundred yards in length, which lay in a fold of the alpside, leading down towards the châteaux where we had lunched, which from this distance appeared but brown specks against the more distant snow. As the slope of this snow was just right for a glissade, we took advantage of it, and almost before we realized that we had left the home of the shaggy Anemone, we were speeding in one long delicious swoop towards the valley below us. After the first tendency to nervousness has worn off, this mode of progression is delightful, especially where a long, uninterrupted incline is available, so that full speed can be obtained, without the risk of coming into contact with a slightly protruding piece of rock, which frequently leaves a lasting, and often visible, impression upon one!

In an incredibly short time we repassed our lunch dépôt, having in a few minutes descended the incline which had cost us so much labour on the upward journey, and as it was now well past five o'clock, we hastened down the rough path, paying but little attention to the beauties which strewed the wayside. After a good hour's trot, frequently varied by a gallop,

REMBRANDT GRAVURE



THE PROSPECT FROM THE GUMMENALP



with our heavy rucksacks thumping us at every jolt, and they were many, Meyringen came into view, looking like a doll's village spread upon the plain beneath.

Still hurrying on, we shortly began the descent of the Alpbach zigzags, and fearing we should be late for dinner, a matter about which the Canon was rightly particular, we ignored the beaten tracks, and took, chamois fashion, to the short cuts, which here lead down in an almost straight line.

After many hair-breadth escapes from twisted ankles, we arrived hot and breathless at the bottom, crossed the Alpbachschlucht, and wishing our guide good-bye, turned down the main street to the Sauvage. After a hasty but refreshing bath, we went down stairs to find that we were just a minute or two to the good, while the old saying, "as hungry as hunters," was far too mild an expression to describe the appetites which the mountain air, the exercise, or perhaps both, had given us.

Of the many delightful excursions which I made while in the Oberland, none are impressed so vividly upon my memory as that to the unfrequented Gummenalp, where, holding up their beautiful chalices to the glorious sunshine, the shaggy Wind-flower jewelled the ground in such profusion that the afternoon light, glancing upon their silky stems and calyces made a bronzy-golden haze above the turf.

## CHAPTER VII

### THE FLOOD

As I have already remarked, the weather during our stay at Meyringen had been most kind to us, the days having been uninterruptedly brilliant. We were now to see what the mountains had to offer in the way of rain. For three days it poured incessantly, and after one or two attempts to derive some pleasure from walks near "home," rigged out in mackintoshes, we gave them up and settled down to playing games, such as blind-man's buff, and three-legged races in the Turn Halle. On the third day a number of the leading spirits in our party arranged a fancy-dress dance for the evening, when we all appeared, rigged out in the most fantastic costumes, from pre-historic men to railway porters, while the ladies represented everything from Greek goddesses to brown paper parcels. After dinner voting took place to decide who should receive the prize for the most original costume; this was succeeded by vocal and instrumental music, culminating in numerous dances, in which a large number of the village folk joined.

While the gaieties were at their height the dreaded fire-horn was heard resounding through the streets,

and though many of our party did not realize its full significance, I noticed that all the local men disappeared as if by magic. Our host and hostess reassured us that it was not a case of fire, which appeared almost impossible owing to the persistent downpour, but that the water was rising in the schlucht, or stream leading from the Alpbach fall to the Aare, although there was no cause for alarm. Our gaieties therefore continued, though minus many a partner, and about eleven o'clock our ball broke up.

To fully appreciate the following incidents it must be clearly understood that Meyringen is situated in a flat valley. The river Aare is joined at this point by the water from the Reichenbach on one side, and the Alpbach on the other, both coming down from the mountain barriers, which run parallel to the river. The latter (the Alpbach) provides the power for working the water-turbines, which produce the electricity to light the whole village. This fall, the one most concerned on this occasion, drains a vast area for miles and miles, up in the Hasliberg, and must, under normal conditions, pass thousands of tons of water between its banks daily. The cascade touches the ground some seventy or eighty feet above the level of the village, and is thence conducted direct to the Aare by a straight channel built and paved with stones set in cement, being some ten feet wide and eight feet deep and is crossed at various points by one iron and two wooden bridges. It will thus be seen that during a portion

of its journey to the river the water is higher than the village itself, though confined by the strong banks of its channel.

At a distance of about twenty yards on both sides of the stream there are secondary protecting banks, in case of accident, except where the iron bridge carrying the road crosses it, and here pieces of grooved iron are let into the roadway, so that boards four inches in thickness can be put into position, when required, so as to form a greatly extended channel for times of extreme flood.

About 11.30 on this particular night, after the majority of our party had retired, I donned boots and mackintosh, and taking an umbrella, went out on a voyage of discovery.

The rain was still pouring in torrents, and on reaching the road-bridge over the Alpbachschlucht, I found men by the score flitting about with lanterns, and by their light, and armed with long poles with a huge rake-like attachment at the end, they kept the large boulders which were being brought down by the raging torrent in hundreds, on the move, since if they once lodged, others would pile up against them, and check the current, and so cause a still further rise in the water.

A few days previously, when I passed the schlucht there was the normal ten or twelve inches of water, swiftly flowing down its smooth and uniform gradient ; on the night in question there was fully six feet six inches of seething blackness, rushing down, leaving



only a clearance under the road-bridge of six inches or so. Hence the alarm.

The huge planks to barricade the roadway were being hastily put into position, while, through the drenching rain, men could be seen at work with their poles and scrapers, from near the base of the fall, right away down to the Aare, a distance of about three-quarters of a mile. The flitting lights of the hurricane lanterns, reflected from the broken surface of the water, coupled with the tremendous roaring noise, made a weird scene. The fire brigade had charge of the operations, and appeared to know what they were about, although from my not understanding German, it seemed as if they were about to indulge in a free fight.

I tramped about through the slush and rain till 12.30, and as the water was then an inch or two lower, I went back to the hotel and turned in, giving instructions to be called at seven o'clock should the rain continue; as I was desirous of seeing the spectacle by daylight.

The roar of the torrent as it bounded over the Alpbach fall was terrific, and as I stood by my open window, a quarter of a mile away, it boomed like continuous thunder, while ever and anon a still louder crash would announce the falling of a specially large boulder from the heights above, to be splintered into fragments on the rocky bed below.

Many of our party (as I afterwards learnt) were

unable to sleep owing to the noise—emphasized, perhaps, by a knowledge of its cause. Nothing of the sort troubled me, however, and I slept like a stone, indeed, considerably more than many of the stones which that night seemed to be veritably alive.

My next consciousness was of a terrific hammering on my door (in my waking dream this had somehow become transformed into nailing down one of my boxes of plants, ready for despatch to England). I roused myself as well as I could from my usually sleepy state when my slumbers are broken, and supposed that I had caused the hall porter to knock a second time—so said “all right” in the most wide-awake tone I could muster. I had hardly rubbed my eyes, however, preparatory to another forty winks, when the knocking was repeated.

Not wishing to appear before a possible female intruder in a somewhat limited attire, I stifled the desire to open the door, and vent my wrath upon the porter for his repeated and unnecessary knocking, and again said “all right,” this time in a decidedly wakeful tone, and this seemed to have the desired effect. What was my amazement, however, upon looking at my watch to find that it was only 4 a.m. I had hardly realized that this must be the cause of my somewhat lazy feelings, when the knocking at my door recommenced.

Being by this time wide awake, I asked what was the matter, and was told in broken English, by a very

frightened maid, that I was "please to get up," as the water was expected to flood the village at any moment, and mine host was considerate enough to think we might prefer to meet it dressed!

I was now thoroughly aroused and found upon looking out of my window that it was raining even harder than on the previous night, while the roar of the torrent, and the crash, crash of the boulders, punctuated with the snapping of the pine trees, as a flying boulder crashed into them, was terrific.

Needless to say, I jumped into my clothes, and descended to learn the news. The maids, the only individuals visible, knew very little more than that the water might come tearing down the street at any moment. I also learnt that mine host had been out all night in the soaking rain (as had all the other men of the village), had been up to his waist in water, and home to change every thread three times already. This seemed to promise an exciting time, so I pulled on my mackintosh and heavy boots again, and in lieu of an umbrella donned a broad felt hat, so as to throw the water clear of my coat collar, and then sallied forth! I found myself the first of our party viewing the scene at the very creditable hour of 4.20 a.m. It was a scene too! one of several during that day which I shall long remember. The road bridge, which I had stood upon the night before, was a hideous tangle of iron and concrete, while at the moment of my arrival two huge baulks of timber, each fifty feet long, were being used as

levers to "prise up" and loosen the *débris*, so as to liberate the mass of boulders accumulating behind it, and which were being augmented every moment by hundreds of others. Having made a fulcrum by piling up a mass of huge stones, thirty or forty men were straining at the opposite end of these timbers, to loosen the wreckage, and so free the passage, and allow the boulders to continue their thunderous journey down to the Aare. The water was nearly two feet higher than on the previous night, and was still rapidly rising, while the whole stream was alive with stones of all sizes, up to that of a nine gallon barrel. The speed of the torrent could not have been less than twelve or fifteen miles an hour, and the whole, instead of glittering as on previous days, was black with mud. The men had been keeping guard all night, and moving on the stones, while the wooden barricade was two or three feet high, and obviously necessary, since the water was pouring over the banks of the *schlucht*, and down the road. The workers looked terribly weary, and were soaked through and through, often being up to their middle in the seething stream. The removal of the bridge, a heavy one, was a fearful job, and eventually men attached to a line had to wade out as far as possible to loosen it. After much labour, however, it was released, and the iron girders went swinging and hurtling down among the fir trees and branches, till they became jammed again, and had to be released or pulled on to the bank.

After watching here for some time I walked (or waded) up towards the fall itself. It was a magnificent sight, and the noise almost deafening. Water, pebbles, boulders, mud, all as black as could be, were pouring over the giant fall, and sending up clouds of dingy yellow vapour. The crash of the stones as they found the bottom shook the ground, so that they could be felt, as well as seen and heard. The plank foot-bridge, which had spanned the stream a little below the cascade, had entirely vanished, and so had all the bank from which it had sprung, while (owing probably to some obstruction) the water had turned sharply to the left after falling, and had gone straight for the pretty wooded bank, through which, only a few days before, we had wended our way towards the Hasliberg.

For a distance of seventy feet the bank and wood had vanished, while the water was pouring over the next thirty feet like a mill-race, and as we looked the tapering fir trees quivered and fell, one by one, as they were undermined by the ravenous torrent, which nothing seemed to satisfy. The whole stream at this point was at least five or six times its normal width, while here and there great islands of boulders had formed where the current was less rapid.

Some little way below the spot I was standing upon, the waters had suddenly swerved to the right, and were rapidly eating into the bank immediately below the Electric Power Station. Had this escaped

observation for half-an-hour longer, the building would doubtless have been undermined; fortunately the attention of the authorities was called to it, and immediately a detachment of men was despatched to protect the rapidly vanishing bank. With a few dexterous hatchet strokes they felled a dozen young pine trees, and lashed these to the bank with telegraph wire, thus forming a rough kind of fender, while a few projecting branches entangled other floating *débris*, deadening the impact of both the water, and the harder cutting material it carried—the broken stones.

So engrossed was I in watching these operations, that it was not until the bank had been safely protected that I realized the state I was getting in, from the mud-stained spray around me. Afterwards, when I was able to see myself, I found that my face was pale chocolate colour, with a delicate mottling of darker spots where the dewdrops had deposited their fullest complement of colouring matter.

By this time it was nearly six o'clock, and as our regular breakfast hour, when not making a lengthy tramp, was 8 a.m., I returned to the hotel and ordered something in advance, since the cool air and early morning adventure had given me a keen appetite. Then out again to find that the water was four feet up the wooden barricade, and but for it would have been tearing down the street, flooding all the cellars.

A substantial secondary dam was being formed one hundred yards lower down the road, by piling logs



SCENE DURING THE GREAT FLOOD AT MEYRINGEN.  
(See page 82.)



ANOTHER SCENE DURING THE FLOOD.



across the street and taking up the granite curb-stones, and placing upon them; this had the desired effect of turning the two streams of water, which spurted from between the joints of the timbers forming the first barricade, into a ditch which was hastily widened to accommodate the unusual amount of fluid.

All the entrance doors of the houses abutting on the street were being protected in a similar way, and the inhabitants were standing about ready to rescue their belongings, should the dreaded inundation occur. About this time the electric light was cut off, owing, it was thought, to the turbines getting fouled by some of the smaller *débris*, and as the morning was extremely murky, this was noticed more than the reader might expect, seeing that it was high summer time.

By 8 a.m. the streets were alive with people and waggons, all bringing timber to act as temporary barricades, while scores of men and boys kept the gullies clear from the accumulating rubbish. Later on, when the extremely poor light had to some slight extent improved, I ventured forth with the camera, and having the kindly aid of a friend who held an umbrella over the instrument, I secured a number of photographs of the extraordinary scenes. Rapid as were my plates, all the resulting negatives were under exposed, still, the two illustrations appearing on pages 82 and 83 represent, in some degree, the scene of destruction and flood, such as falls to the lot of few Swiss visitors to experience.

By 11 a.m., despite the frantic efforts of all the men, the schlucht was completely choked with boulders of all sizes, and the water had been forced into the road leading to the Aare and the meadows adjoining it, only being kept from spreading on to the neighbouring land by the secondary stone wall. The road which I had walked along at 6 a.m. was by this time two feet six inches under water, while a seething torrent was lapping the topmost board of the wooden barricade, which had been increased in height to six feet six inches. The strain upon this temporary support was terrific and the great fear was that it would be unable to withstand the pressure. Immense baulks of wood were being let into the road at an angle, to act as buttresses, so as to strengthen it, and fortunately this prevented any further calamity.

About mid-day the rain abated, and by two o'clock had ceased, thereby reducing somewhat the force of the stream. Later on a body of two hundred soldiers from Thun arrived, and with the villagers proceeded to excavate the original channel, an immensely exhausting task, since thousands of tons of stone had to be hauled out of the conduit. The Meyringen women heroically aided the toilers, and were to be seen with their skirts tucked up, paddling about in a foot or more of water, carrying pails full of steaming soup, and baskets containing bread and cheese, to the hungry men.

During the afternoon, the rain having finally given

over, I was able to take a more extended walk, and managed to get part way along the Aareschlucht. Everywhere evidences of the flood, in the shape of sand and mud deposits, high above the normal river level, were painfully apparent, even though the water was rapidly receding, and I was much interested to notice in the gorge of the Aare, near to where the graceful waterfall leaps from the limestone cliff (see page 17), that a second jet had made its appearance.

The immense quantities of spray rising from these two falls wetted the observer quite as thoroughly as the rain had previously done. Having traversed a small portion of the wooden gallery, which has been formed along the face of the cliff, a few feet above the river, I was brought to a sudden halt, as here for a space of thirty or forty yards, the wooden pathway had totally disappeared, while within a few inches of the iron framing from which the planks had been wrenched, the angry river seethed and roared in its frantic haste to escape from the narrow channel formed by the opposing cliffs. Occasionally, among the foaming waves a tree trunk would be seen, twisting and turning as it was hurried along, then striking some unseen rock it would be jerked into the air, only to fall with a crash into the water again. In the narrower part of the gorge quite elaborate barricades had been built up by this drift wood, in a few places stranded two feet above the torrent showing what a height the river had attained only a few hours previously.

Towards evening the rain re-commenced, and the villagers were much afraid that the water might rise again, necessitating a second all-night vigil. It was now common knowledge that the whole trouble had arisen from the excessive rain causing a landslip on the Hasliberg, and when, on the following day, I visited this spot it was a matter of no surprise that so much detritus should have been carried towards Meyringen, for the whole of one side of a steep embankment, where the road made a double curve above the Alpbach, had given way, and the portion remaining seemed to require but a touch to send that also hurtling and slithering down into the brook. Fortunately the rain clouds appeared to have exhausted themselves, and the following morning broke fine and sunny, so that the work of clearing the wreckage proceeded steadily.

As my holiday expired shortly after this I was obliged to leave Meyringen the next day, so that I did not see the whole of the work of restoration; my last glimpse being of the hundreds of workers, still digging out the choked up schlucht, and the meadow on either side of it, which originally had been so fresh and inviting, strewn with vast quantities of water-worn boulders, piled up in a most eccentric way. This experience, however, was one of a lifetime, and had it not been for the trusty timbers forming the road barricade which stood the terrific strain so gallantly, there is no doubt that Meyringen itself would have been flooded, and though no lives might have been

lost, the damage would have been increased one hundred fold.

Few visitors to Switzerland have the opportunity of participating in such an exhibition of the sterner side of life among the mountains, which, though so delightful from the holiday-maker's point of view, doubtless has its more prosaic side. However this may be, the events of those few June days during the flood, made me realize more forcibly than whole months of fine weather would have done, the mighty forces that have been at work for countless ages, modelling the mountains and valleys into their present form.

## CHAPTER VIII

### RETURN

It was with considerable regret that we said good-bye to our Meyringen acquaintances, all of whom had been most kind to us. Leaving the hotel at eleven o'clock, we made our way to the station, where in due course, amid much excitement on the part of the officials (as though the despatch of a train was as great an event as the arrival of an aeroplane), we eventually steamed out.

Standing at the end of the open observation car, I watched the panorama swing round, as we turned towards the steep ascent of the Brunig Pass. The same features in the landscape met my gaze, as upon my entry into Meyringen, but how different they now appeared to me. There was the Reichenbach Fall, with its majestic stream of glittering water, peeping coyly from its half drawn veil of vapour; beyond soared the Reichenbach Alp, standing up like a giant tower, and on its green slopes my imagination could almost detect the swathes of purple orchis which I saw there on one occasion. To the left, the gaunt ridge of the Engelhorn rose skywards, while in the far distance the flashing summits of the Wetterhorn stood out in

bold relief against the blue sky. To the right stretched the valley of Meyringen, threaded by the silver ribband of the Aare, so recently in flood, while away in the distance its narrowing thread lost itself in the blue waters of Lake Brienz, lying so peacefully amid its mountainous setting. How the memory of that hot tramp along the dusty road to Brienz village returned to me, and also the deliciously cool air on the lake itself, as we crossed to the Giessbach Fall and Interlaken.

Just before the last feature in the now familiar landscape was blotted out by the intervening Robinia trees, there rose up against the sky, to my left, the curiously ant-hill-like outline of the solitary Gummenalp, the home of *Anemone vernalis*.

On this, our homeward journey, it was our intention to detrain at the lake-side station of Alpnachstad, and go aboard the steamer which would then carry us across the Lake of Lucerne. The scenery during this part of the journey was magnificent. From the blue waters of the lake, mountains of every conceivable form and outline rose to immense heights, while dainty villages, each with their high-towered church, nestled in almost every inlet. The soft tones of the more distant mountains, the dark wooded shoulders sloping down towards the water, each becoming stronger and more distinct as they approached the eye, formed pictures of captivating beauty.

As we neared the town of Lucerne the lake became alive with pleasure craft, frequently adorned with

gaily coloured trimmings, while along the broad roadway which skirts the lake, deliciously cool avenues of trees spread their welcome foliage over the pedestrian. From this boulevard, the trunks and branches of whose trees formed a fitting framework, our eye wandered out lakewards, past the lines of gaily painted boats, which gave an oriental touch of colour to the foreground, to the beautiful outline of Pilatus on the one side, and the Rigi on the other, while between these two portals glittered numbers of other still more distant peaks.

Having several hours to spare in this beautiful spot, I sauntered through many of the older streets, admiring the quaint buildings, along the picturesque timber bridge, in the apex of whose triangular roof are paintings of episodes in Swiss history, and incidents in the lives of the patron saints of Lucerne—St. Leodegar and St. Mauritius—finally making my way to the famous Lion of Lucerne, Thorwaldsen's noble monument, carved out of the living rock, to the memory of the officers and men of the Swiss Guard, who fell in the defence of the Tuilleries, in 1792. Close to this is the entrance to the Gletchergarten, a place of unique interest to the nature lover. I do not think I can do better than quote the preface of the guide book, obtainable at the garden. Albert Heim, Professor of Geology at the University of Zurich, says:—

“In the autumn of 1872, Mr. Amrein-Troller was having a cellar dug in the proximity of the monument



of the Lion at Lucerne. After having removed a stratum of arable earth, several feet in thickness, and another layer of shingles, the workmen struck upon the firm grey rock of the country, in which were sunk many deep excavations, cauldron-shaped, at the bottom of which lay large round blocks of Alpine rock. I was called in to examine the nature of the surface, which was soon to be destroyed by further digging and blasting. Along the sides of this first Glacier Mill, several more were discovered.

“ There can be no doubt that these cauldron-looking excavations owe their origin to the action of erosions at the foot of cascades. The rounded boulders, seen at the bottom of the mills, have been whirled about by water and have polished the mills by friction. It is in vain we look for the cliffs from which the water must have fallen in a torrent upon the surface of the rock; but what we do notice is, that this surface is furrowed and scratched between the mills as only glaciers can belabour their rocky beds. The boulders that lay in the mills are erratic, *i.e.*, have been dragged to this place, by the glaciers of an epoch long past, from the innermost parts of the Alps. Many of them, which were, before the excavations, covered with layers of detritus and of arable land, show the characteristic furrows and scratches of the stone blocks which are caught between glacier and rock, and have been polished by the slow, forward progress of the former. The holes in Lucerne have, incontestably, been hollowed out by

the torrents of melted snow that dashed down the steep end of the formerly mighty glacier, or rushed through the ice-crevices down to the ground, and the now-disappeared cliff was glacier-ice. It was in those long-by-gone days, when the glaciers were descending from the Alps, and had extended as far even as the Jura mountains, that the mills of the Glacier Garden were formed. The Giant Pots were filled by the moraines from a glacier giving way under the effect of a warmer climate, and the detritus brought down by the torrent, and have remained thus hidden till they were exposed to view in the autumn of 1872.

“Like discoveries have been made, as is well known, in Scandinavia, and in other parts of Switzerland ; but the glacier-mills in Lucerne surpass any of those by the perfection of their forms and the distinctness of the phenomenon. To meet the doubts expressed by some visitors, whether man’s hand had not assisted nature, I hereby testify both as a geologist and as an eye-witness of the first unexpected discovery, as also of the subsequent careful excavations of this so wonderful phenomenon, that the hand of man had nothing whatever to do with the formation of these glacier-mills, and polished surface of the glacier, nor with the erratic boulders that lie about or in those mills, but that we have here to deal with a marvellous operation of free organic nature, a relic of a time when these countries were not yet inhabited by man.”

Many of the pot-holes are of immense size, the

largest measuring twenty-six feet by thirty feet, while one particularly interesting grinder is of granite, which must have been glacier-borne from the mountains of the Gotthard.

To aid the visitor in clearly understanding the way in which these giant stones were swirled round and round in the pot-holes below the glacier, a model has been made, showing a torrent of water rushing down from above, and continuously revolving a polished boulder in its still smoother cup-shaped depression.

I should have enjoyed more time in this instructive place, but the need for a meal before the long railway journey to Bâle, and thence to Ostend, rendered it imperative not to linger.

Having secured my luggage from the Handgepäck at the palatial railway station at Lucerne, we entrained just before 9 p.m., and after a good run to Bâle, where the Customs examination had to be again endured, we proceeded to the seaboard, arriving there at noon the following day. As on the outward journey the sea was calm, and the crossing was made without serious incident.

When I look back upon my first Swiss trip, with its teeming recollections of the myriad floral jewels which bestrewed the mountains we tramped over, I cannot but realize that no holiday in this country, beautiful though it is in many places, can ever efface from my memory the happy, strenuous time I enjoyed when I was in Meyringen.

## CHAPTER IX

### PHOTOGRAPHIC NOTES

I WILL here assemble, as far as may be, all the photographic matter pertaining to my expeditions, so that my non-photographic readers can the more easily skip references which do not especially interest them, but which, I hope, will be of considerable value to my photographic readers, and after all, in these days of "press the button" photography, who is not, to some extent at least, interested in this art-science?

Having, as I have already mentioned, decided to secure a collection of plant photographs in addition to landscapes, and general views, it was necessary to give some careful thought to the apparatus, which would enable me to deal satisfactorily with such widely different subjects.

While for general snapshotting there is nothing to equal the folding Kodak, this form of instrument would not be suitable for the varied uses I wished to make of it. After much deliberation, I decided to take one of Houghton's Tropical Sanderson half-plates, a teak model of which I had been using for some time with very great success. While so far as weight was



THE RÜCKSACK IN POSITION.



concerned it was heavier than I could have wished, it had the numerous good points which have deservedly secured the name which this camera bears. The items which weighed chiefly with me were the following: the swing-back which, though not extensive, is most useful, a considerable rising front, very convenient in narrow village streets, and a really *long* extension, the bellows drawing out to twenty-three inches. For my flower photographs this latter point was of the utmost importance, since it enabled me to use a long focus lens, to secure large scale pictures, so avoiding distortion due to the camera being too near the subject.

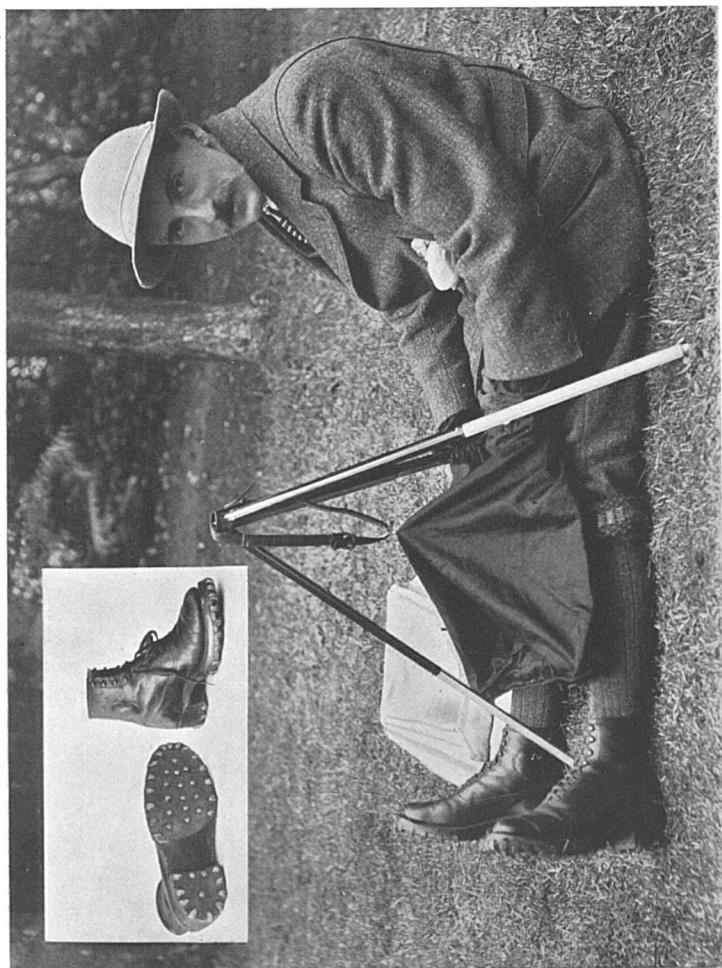
Another item which experience had shown me was a necessity for dwarf plants, was a tilting table, which would enable me to look down upon a plant at an angle of approximately thirty degrees. While it would appear to the uninitiated to be the easiest thing in the world to so arrange the tripod as to give this tilt, it is considerably more difficult than it seems, especially on steep or rocky ground. This tilting table was simply constructed by making what was really a second camera base and hinging it to the lower front edge of the camera baseboard. When this new board was fastened to the tripod in exactly the same manner as the camera usually is, it allowed the latter to be tilted to almost any degree, and could be firmly fixed in any given position, by means of a piece of slotted brass gripped by a milled headed screw, arranged on each side of the camera. These two brass strips were so placed

as to lie parallel to the baseboard, when the camera was closed.

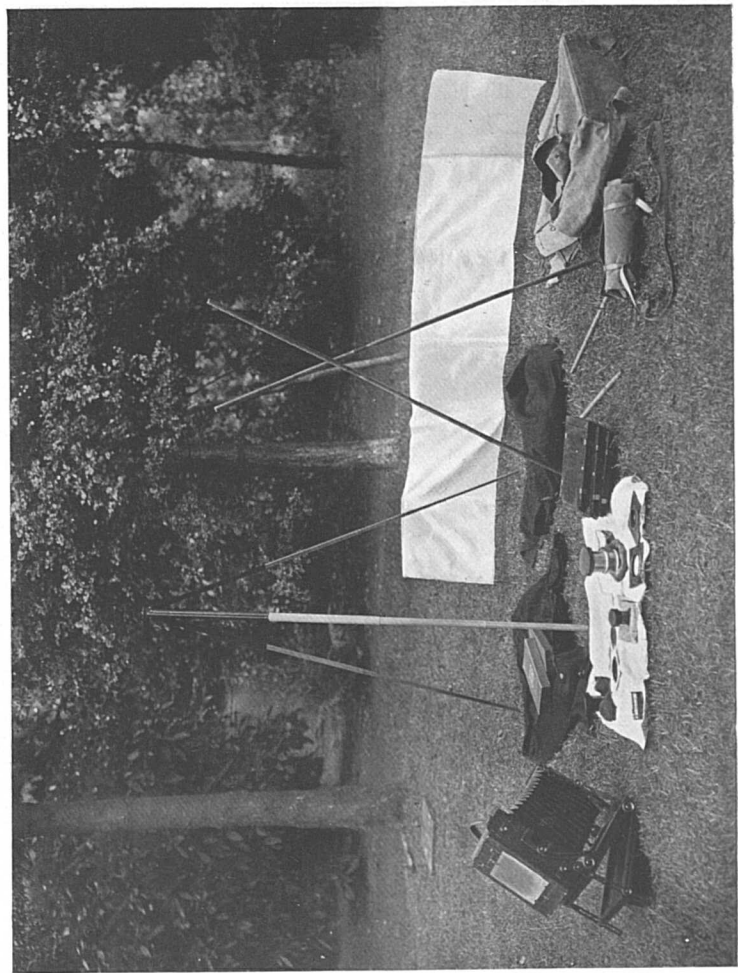
The next consideration was what stand I should take, it being essential that it should be both rigid and portable. This proved a much more difficult matter than I had anticipated. While most camera stands will be sufficiently rigid on calm days, and with a short extension, it is when the bellows are out to the full that their weakness becomes apparent, unless they are well constructed; and these better stands all seem to have the disadvantage of undue weight and want of compactness.

My desire has been to obtain an aluminium tripod, of the telescopic variety, and while upon trial this met the requirements so far as lightness and portability were concerned, it left an alarming amount to be desired in the matter of rigidity. Despite the splendidly rigid construction of the Sanderson camera, I found, owing to the small point of contact in the telescopic stands, that when fully extended, a light tap on the lens would cause the whole thing to vibrate for some seconds. This seemed hopeless, until the idea of a light support at the front end of the camera occurred to me. After some little trouble a bipod was designed, which entirely met the case, and rendered the camera immovable when the exposure was about to be made, and yet was rapidly put into position, or packed into the camera case, adding merely eleven ounces to the weight of the whole equipment.





CHANGING PHOTOGRAPHIC PLATES. INSET—MOUNTAIN BOOTS.  
(See page 100.)



MY PHOTOGRAPHIC KIT.

From the illustration opposite it will be seen that this bipod was formed out of bamboo, cut to fifteen inches in length, and jointed by means of light brass ferrules, much after the manner of a fishing-rod. Eight of these sections (that is, four for each of the two legs) enabled me to support my camera at a height of four feet nine inches from the ground, while when working nearer to the plants it was the work of a moment to put one or two of the sections into position, instead of the full number. The method of gripping the two legs together was extremely simple, and consisted of a loop of brass wire, attached to a small brass plate, through which was "tapped" a milled headed screw. This loop was slipped over the two legs while they were parallel, they were then opened in such a way as to form a **V** at their upper end, into which the lens would rest (as in a cradle), the loop being then screwed up, while the lower extremities would stick into the ground, which was facilitated by sharp spikes being inserted into their lower ends. Although from the description it may appear as though this bipod was an elaborate affair, it was by no means so, and was most effective in use, since by its aid the camera was fixed at its two most distant ends (by the stand at rear and the bipod in front), and however great the extension, or gusty the wind, subsequent results showed no sign of vibration.

Now with regard to the question of taking plates or films—roll films or film packs are undoubtedly the

most convenient, since they are so light, and when they and plates are at their best, there is nothing to choose between them as regards quality. There is, however, less choice as regards brands of films, compared with plates, and yet again cost is no inconsiderable item, especially in half-plate size! Having for some time been working with the Cadet Royal Standard Ortho plates, which have a rapid emulsion of high colour sensitiveness to the yellows, producing a clean, fine grain deposit of good gradation, and further (a most important point), being thoroughly familiar with them, I decided to take this brand, and I believe, from the results obtained, (in many cases reproduced herewith), they fully justified the confidence I reposed in them.

A matter of considerable moment on such a journey was how the changing should be accomplished. The choice rested between six double dark slides, each holding two plates, or three D.D.S. and a changing bag. The former arrangement (which is quite bulky enough in addition to one's camera) would give me the opportunity of making twelve exposures on any one day—since once away from the larger villages or small towns, the chance of a friendly chemist, who would lend his dark-room was out of the question. The second alternative, namely a changing bag, would mean that I could carry one, if not two boxes of spare plates—making a minimum of thirty exposures possible on one outing, and with practically no ad-

ditional weight beyond the plates themselves. This I decided upon, and set to work to evolve a changing-bag which would be the smallest, compatible with efficient working.

It is surprising that so many "camera-men" still favour a bag into which they put their head—or else one which has an eye-piece to fit round the head by means of an elastic. It has always seemed to me that both these arrangements are a delusion, since in the first case one is half suffocated before the operation of changing plates is over, and in the latter it is practically impossible to see anything inside the bag (despite the nicely arranged window), until one's eyes have become accustomed to the change of light, from the brilliancy out in the open, to the ruddy gloom in the bag, a process which usually takes many times longer than changing the plates. I consequently discarded these methods, and decided to work solely by the sense of touch, and with reasonable care (more especially in not chatting to one's companions during the operation) there is not the slightest difficulty—the process of changing three half-plate D.D.S. need occupy seven or eight minutes only.

I had a rectangular bag made, measuring twenty-one inches by twenty-two inches, and two-and-a-half inches deep, so that it easily contained the three D.D.S. and one or two boxes of half-plates. At the two corners of one of the longest sides, two sleeves were fitted about eight inches long, one of them just large

enough to take the D.D.S. These sleeves are arranged with elastic fastenings so that they could either fit close to the operator's arm or could be folded and looped into position by means of an elastic band. If these are put on under one's coat sleeves, and the sleeves then pulled over them (this latter by a friend), the whole is quite light-tight.

The one point to observe in using the "book form" dark slide is to prevent the upper part or "roof" of the bag becoming caught in the slide, as the latter is closed, and I found a very simple way of obviating this was as shown in the illustration on page 96. It will be noticed that to a ring sewn to the "roof" of the bag a piece of string or strap is attached, and this is made fast—at the right height to leave working room in the bag—to one's tripod, which is erected over the operator's knees. This is a great convenience as it frees the "headway" inside the bag, and simplifies the matter considerably.

Although the bag should be made of not less than three thicknesses of close, stout black sateen, and a capping put over the seams to make them quite light-tight, it is still advisable to avoid changing in direct sunshine, since the fierce rays of the summer sun will pierce their way between the fibres of the material, despite the several thicknesses.

I have found that it is often practically impossible to secure the kindly shade thrown by some tree, or building, while when above the tree line in the mountains

one is often unable to avoid the full glare of the sun, and for such occasions the following very simple contrivance can be resorted to:—I had an eyelet a quarter-inch in diameter fixed midway along one edge of the focussing cloth. This can be readily fitted over the projecting screw in the telescopic camera stand—the cloth being brought round the tripod legs in a tent-like manner. At the two ends of the cloth (on the side where the eyelet is fixed) I had two pieces of tape, about eight inches long, sewn, and by sitting on these two tapes it was easy to keep the tent-like contrivance in position, even on a windy day; while the two opposite corners (those furthest from the operator) can be kept in place by one's boots, which for mountain work should be of the nailed variety, they then make excellent "paper weights" for the purpose. This allows only the weaker light which penetrates the cloth to fall upon the changing bag, and at the same time utilizes for that purpose an item of the kit which one must inevitably carry. By this means I have changed many dozens of rapid ortho plates in a fully exposed position, without the slightest fogging. It is hardly necessary to say that I took "backed" plates, and quite apart from the real purpose of backing (*viz.*, to avoid, or minimise the risk of halation), this backing is a valuable asset, when changing by the sense of "touch"—the distinctly rougher surface of the backed side of the plate readily distinguishing it from the film side.

After exposure the plates were packed face to face

and returned to their boxes, any extra room being made good with crumpled paper, so as to prevent the possibility of the plates jolting, or rattling about. They were then put into the brown paper packets in which the boxes are purchased, which I had carefully opened at one end only, making a sort of bag for the exposed boxes to slip into. These packets were given an index number, and a corresponding page in my note book recorded the various subjects contained in any given box.

Having dealt with two of the chief items of my kit, I will now refer to the other equally important, though smaller portion of the equipment. First of all as to the lenses : Knowing the convenience of having lenses of varying foci I carried three, *viz.*, 6in., 8in. and 12in., all working at  $f/8$ , though rarely if ever used at that aperture. These having brass adapters, they rapidly interchanged in the camera front. Of colour screens or light filters I carried two, both yellow ones, the lighter for ordinary work being a four-times, and the darker a twelve-times, while last of all, though none the less invaluable, I took a Watkins exposure metre.

Knowing the difficulty of photographing flowers in the open, owing to the wind, and realizing the possibility of guarding against this to some extent, since most of the mountain flowers are dwarf in stature, I sought the advice of an acquaintance, Dr. Somerville Hastings, who has been very successful in mountain



plant photography, and thanks to his kindly help provided myself with a wind screen, very compact when rolled up, as efficient as a wind screen can be, and practically of no weight. It consisted of a piece of white calico, fifteen inches wide and six feet long. At intervals pieces of tape were sewn on to it, to form narrow tube-like pockets, and into each of these an umbrella rib was placed, which projected from the end of the wind screen 4in. or 5in. The upper edge of the screen was sewn to the "eye" of the metal rib, thereby keeping it in place, otherwise the material was free to "ride" up and down the seven legs, and so accommodate itself to inequalities of the ground. When these legs were pushed into the earth in a semicircle, to windward of the plant, but just out of view from the camera, a large percentage of movement was eliminated. The umbrella ribs make ideal supports for such a purpose, owing to their strong and "springy" qualities, giving them the maximum of elasticity without becoming mis-shapen.

Having provided myself with the apparatus, the next thing to consider was—what to carry it in. My ordinary camera case would, of course, not suit my purpose, since it would not hold the various oddments I wished to take, besides being, for such a tour, inconvenient. The ordinary way of carrying such a case, slung over one's shoulder, is far from ideal, since on rough ground it is much inclined to swing about—while if slung across the chest it restricts the breathing, and is

generally uncomfortable. All these difficulties disappear if we go back to the excellent design of the Swiss rucksack, which is constructed to carry a weight, with the minimum of inconvenience, leaving both arms free, and the load so fixed that it will not swing about and upset one's balance in hilly country. Fully appreciating these points, I contrived such a case, making it of Willesden canvas, which is an excellent wearing material, and waterproof—slung in the rucksack manner by webbing of the same material, all easily obtained from the Willesden Canvas Company.

While the Swiss rucksack is wholly limp, I decided (since a camera has sundry corners which are not too convenient, if periodically prodding one in the back) to make the rear, and bottom of my case rigid, and this was easily accomplished by utilizing that light, but tough material, known as "three ply" wood. This rigid part was slipped into the rectangular sack, after the latter was sewn up, and the rivet which secured the shoulder straps was put through from the inside. The top of the 'sack, which projected above the rigid backboard, had a draw-string fitted to it, while a canvas flap over this made all quite watertight. Two horizontal webbing straps and prongless grip buckles were fixed at intervals, so that when the 'sack was packed up these could be rapidly tightened, thus preventing the contents rattling about. On each of the two narrow sides of the 'sack two tubular sockets were formed, and in these the tripod, windscreen, bipod, collecting knife

and screwdriver were placed, while the 'sack itself was provided with one large, flat pocket, to accommodate maps, notebooks, etc., in addition to other small items of the kit. As in the rucksack, one shoulder strap was a fixture, though fitted with a slide, by means of which its length could be varied ; to the other a spring-hook was attached. All that was necessary to detach the 'sack was the release of this hook, when the whole thing would slip off the left shoulder. The most critical matter was the determination of the point of attachment between the 'sack and the shoulder-straps, if it was too low the 'sack "rode" too high, and was unsteady, while if too near the top the lower edge of the 'sack chafed the back of the wearer. A few experiments rapidly decided this matter, however, and from my own experience I can imagine no more convenient method of carrying such an outfit.

While the foregoing account of my equipment may sound rather formidable, like many other things it has taken longer to describe than to construct, and after all, it is much more satisfactory in the long run to do the thing thoroughly than to reach one's hunting ground only to find, when too late, that the apparatus is not all that could be desired. I also derived a considerable amount of pleasure from evolving the various unusual items referred to, and I feel that the time spent was amply justified.

After completing the preparation of my kit, some weeks before the time of my departure, I took every

opportunity of using it, including the changing bag, just as I should do in Switzerland, so as to become thoroughly familiar with every detail. To obtain the very best results from subjects which need all one's attention it is advisable to be able to manipulate the camera quite automatically, and for this purpose some little practice is desirable, particularly when new fittings have been introduced. Frequently I hear of photographers borrowing a camera for use on their holidays, perhaps because their own is not up-to-date, and without even testing it, cheerfully exposing box after box of plates, only to find on development that there was a pin-hole in the bellows, which has spoiled most of the negatives ; or else something, with which they are not familiar, goes wrong, and puts the instrument out of action. All the disappointment which follows such a mishap might easily have been prevented by a thorough test beforehand, or in many cases remaining faithful to their old camera, which, however out-of-date, was probably quite familiar to them.

Before leaving the question of equipment, though hardly included in the photographic portion of it, I would like to refer to the all important matter of boots. While I proposed to do nothing in the nature of real climbing (*viz.*, over ice or ice-glazed rocks, where ropes might be a necessity), I cannot too strongly emphasize the advisability of good, strong, comfortable boots being taken. Frequently, on steep mountain

sides, the grip which the boots get on the rocky ground, or snow, is all that intervenes between the tourist and a fall of two thousand feet or more. The tracks, too, though excellent in many places, are usually far from smooth, and a really thick sole is a necessity, if mile after mile is to be covered in anything like comfort. Even on steep grassy banks, without well nailed boots, serious slips may occur.

I remember one evening after dinner, strolling on to the hillside in my unnailed shoes, and very nearly coming to grief over an innocent-looking grassy bank, whereon the leather skidded, as on ice, bringing me down heavily on to some outcropping boulders, which proved remarkably hard.

The best form of nail appears to be made of wrought iron and of a shape which will allow of the heads being bent over the edge of the sole. By far the most comfortable are some old boots, which can be stoutly re-soled and nailed before we leave home. The small illustration on page 96 will indicate the kind of boots which I found particularly useful, and which permit the wearer to stand with ease on an extremely steep slope, and bite into the rock in a manner really surprising to those who have not experienced it.



PART II  
THE VALAIS





## CHAPTER X

### THROUGH FRANCE TO GENEVA

AFTER such a delightful experience as I have endeavoured to recount in the foregoing pages, it is not surprising that I anticipated the keenest pleasure from a second holiday among the mountains. When in the spring of 1912 my friend, Mr. Irving, of Kew, suggested that we should make such a trip together, we set to work with considerable zeal to sketch out a route which would enable us to visit some of the most likely places for alpine plants, in addition to such famous beauty spots as Zermatt and Lake Geneva. After much careful planning, aided very materially by my good friend, Mr. Dallinges, of Chêne Bourg, Geneva, we decided upon the following programme. Crossing to Paris, we were to travel direct to Geneva, spend a few days there so as to visit the alpine garden, known as Jaysinia, at Samoëns in Savoy, some thirty miles from the former city. After returning to the lake we were to travel along its north side to Bex, detraining there, and walking up to Pont de Nant, where the University of Lausanne possesses an alpine garden at an altitude of 4,110 feet. Here we hoped to see many floral

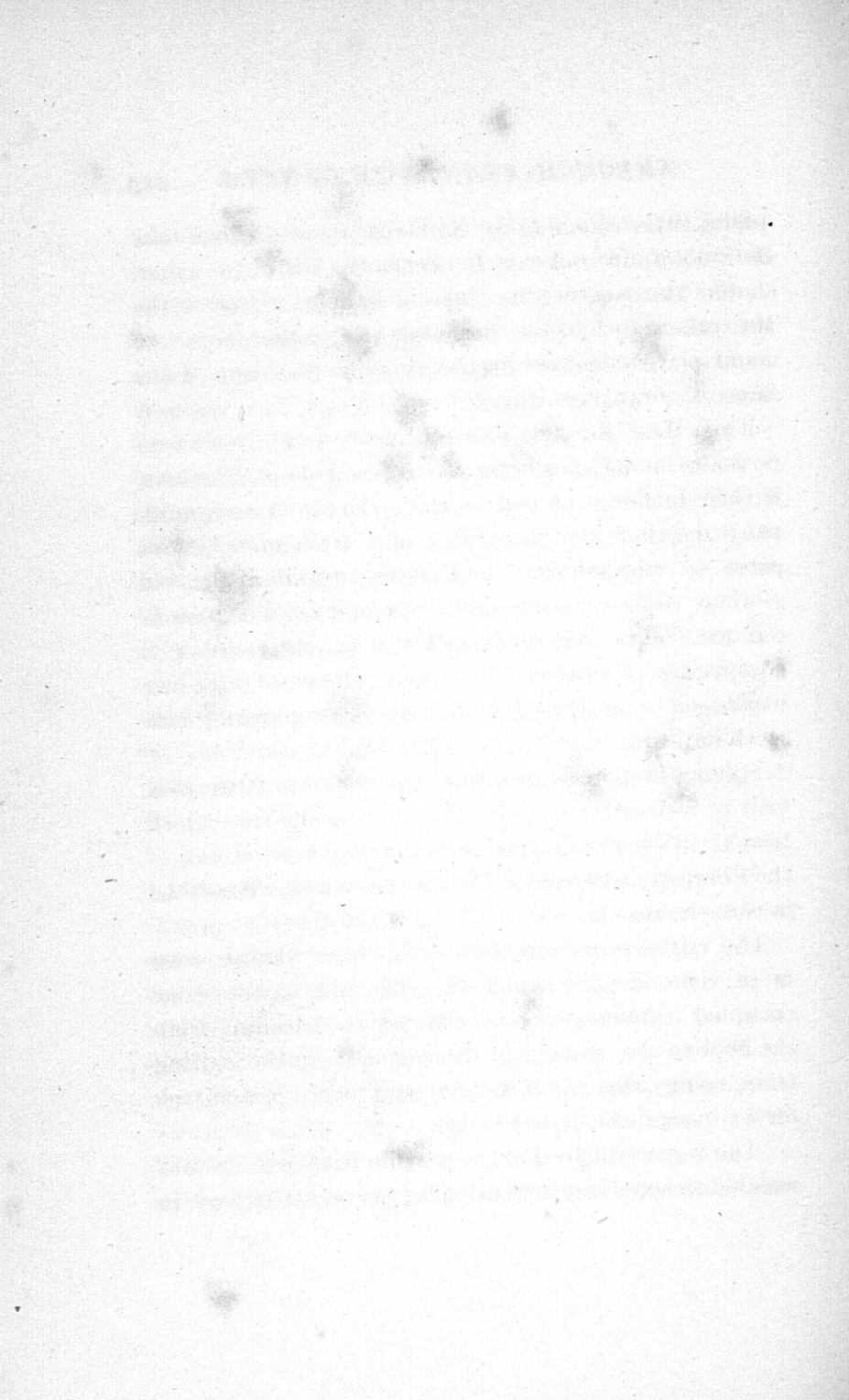
treasures growing under conditions very closely resembling their natural ones. High above Pont de Nant rise two mountains, known as the Great and Little Muveran—just beyond the summit of the latter is one of the Alpine Club huts, and our idea was to reach this shelter and there spend one night, travelling thence on the following day to a secondary station, some four or five hours tramp from there, where the granite and the limestone (which naturally carry a different flora) meet. At this spot we hoped to secure a large number of particularly choice plants, the altitude being considerable (over 10,000 feet), the somewhat unusual conditions, as stated above, prevailing there seeming to promise many prizes. Returning from the Muveran to Pont de Nant, and thence back to Bex, we hoped to secure a train which would take us up the Rhône Valley as far as the little wayside station of Turtmann. Here we proposed to spend the night, starting early the following morning up the steep and narrow Turtmann Valley, to the Schwarzhorn Hotel, some five hours distant, and situated amid delightful Alpine scenery at 6,200 feet.

If the conditions there proved to be as satisfactory as we anticipated, we expected to make it our home for a week or so, while eventually we hoped to cross the Augstbord Pass, (a "saddle" immediately to the south of the Schwarzhorn, necessitating a climb up to 9,500 feet), giving access to the steep Zermatt Valley, which lies beyond its eastern side. Dropping down to the

REMBRANDT GRAVURE



EARLY MORNING IN TURTSMANN



quaint little village of St. Nicklaus, we could then take the mountain railway to Zermatt, there to enjoy, should the weather be clear, delightful views of the Matterhorn, while by ascending the Gorner Grat we could place ourselves at the view-point of one of the finest panoramas in Europe.

This, then, is a rough sketch of the journey we proposed to make, and upon which I will ask my readers, if their imagination will support the strain, to accompany me, not in a hurried gallop from one famous place to another, but a leisurely wandering amid glorious Alpine scenery, always keeping a sharp lookout for plants and other items of interest, and well equipped with a camera suitable for all-round recording work, such as the illustrations accompanying this work indicate.

Having prepared our outfit much as on my previous visit to Switzerland, we left Victoria by the ten o'clock boat train for Newhaven, embarking thence on one of the Company's steamers, for Dieppe, which we reached in three hours.

The customs examination at Dieppe was an even more than usually farcical performance, the time occupied from stepping off the gangway leading from the boat to the wharf, and securing seats in the waiting train, being three minutes. Surely a record in despatch for a Government department!

The feature of the landscape from Dieppe to Paris—which attracted my attention most, was the way in

which every particle of the ground was cultivated—not in fields of considerable extent, laid down with one crop, but in narrow strips, with alternating crops. Bordering the railway line and many of the fields, and roads, especially where the ground was moist, were large numbers of very characteristic aspens (*Populus tremulus*). They were immensely tall and slender, evidently having had their lower branches trimmed off from time to time, so as to cause them to forge ahead, and certainly they had in most cases reached an astonishing height, while from many of their branches depended large bunches of mistletoe.

Between Rouen and Paris the river Seine attains a considerable width, and is particularly beautiful as it winds through the fertile valley, which is from four to six miles across, bounded on both sides by hills, frequently jutting out into massive headlands, all being cultivated.

Just after 7.0 p.m. we ran into the Gare St. Lazare, at Paris, and as our train to Geneva left the Gare du Lyon, on the other side of the city, we secured a taxi and speedily found ourselves in the centre of the French metropolis. The idea of controlling the traffic in Paris appears to be absolutely unknown, the main streets being one hideous confusion of carts, taxis, motor cars, and huge motor buses, intermixed with pedestrians, to the considerable disadvantage of the latter. Our driver was quite a character, and tore along the roads regardless of foot passengers, or when

he did deign to notice them, merely waved them aside as if the whole street belonged to him.

At intervals, on this exciting journey, we were just able to notice that the buildings were particularly fine, indeed, palatial in many places; the large open squares decorated with beautiful groups of statuary also attracted our attention.

Along one avenue we sighted Notre Dame, and towering high above all the graceful Eiffel Tower, while we just caught a glimpse of the Bois du Boulogne, with the triumphal arch at its end. Eventually, and somewhat to our surprise, we reached the Gare du Lyon without mishap and left there at 9.30 p.m. for Geneva.

We were fortunate enough to secure an empty compartment, so that my companion and myself were able to make ourselves comfortable, one on each seat, where we reclined at full length, and slept soundly till 4 a.m.

When we awoke in the morning the scenery through which we were rapidly passing was glorious. We were travelling across a plateau some ten miles wide, bounded on either side by rolling hills, all richly wooded. Brilliant sunshine flooded the whole panorama, and we joyously returned the salutes of the peasants, who even at this early hour were at work in the fields.

At Bourg a fresh engine was attached to the rear of our train, and we started up a steep valley, with beautiful blue interlapping hills unveiling themselves

as we progressed—evidently the northern side of the range which we were to penetrate. The outlook rapidly became more and more hilly, in many places reminding me of Symonds' Yat, on the Wye, the grandeur of whose limestone cliffs make that quiet little Monmouthshire beauty spot so famous in the West Country.

As we rose, the scenery gradually assumed a sterner and more rugged character, until shortly after passing Cuoz, and surmounting a saddle-shaped depression, an exquisite panorama opened out before us, the chief features of which (eighty or ninety miles to the south-east), gleaming and sparkling in the rosy distance, were the snow-clad summits of the Massive du Mont Blanc. All too soon this beautiful view was obscured by intervening rocks, and in another forty minutes our train drew up at Geneva. Here my friend Mr. Dallinges was kindly awaiting us, and after a few minutes conversation, we drove to our hotel and enjoyed a much needed breakfast.

Geneva is a delightful town, situated at the western end of the Lac Lemman, and is divided into halves by the river Rhône, which forms the outfall of the lake. Some seven or eight bridges, several of them of beautiful design, lead from one part of the town to the other. The highest of these, the Pont du Montblanc, is 280 yards long, and leads from the broad street running down from the station to the Jardin Anglais, or English garden. This beautiful promenade forms



the chief centre of attraction, and from it delightful glimpses can be secured of Mont Blanc, especially at evening time, when the Alpine glow is often very apparent. Handsome quays, with tempting shops, flank these broad streets and bridges, whilst in a conspicuous position fronting the lake is the National Monument, a bronze group of Helvetia and Geneva, by Dorer, commemorating the union of Geneva with the Confederation in 1814. The English garden is attractively arranged, and has some fine trees growing in it.

After a stroll round the flower market, quaintly arranged under huge umbrella-like awnings, we visited Mr. Dallinges' alpine nursery at Chêne-Bourg, a suburb of Geneva. There, in a beautiful spot, with rich alluvial soil, ample sharp sand and a copious water supply from an adjacent spring, which runs as a miniature stream through his alpine garden, we saw many plants thriving amazingly. The Acantholimon, Erodiums and Onosmas, of which he had a large collection, seemed especially happy in the fierce sun heat of the district. In the afternoon Mons. Corevon kindly showed us over his extensive garden, where we noticed that the sun-loving plants seemed especially happy.

As it was our intention to visit on the following day the beautiful garden known as Jaysinia, at Samoëns in Savoy, some thirty miles from Geneva to the south-east, for which a very early start had to be made, we retired early. We were called at 4 o'clock the next morning, and after breakfasting, went by tram for a

couple of miles. Soon after passing the French frontier the tram connects at Annemasse, with a quaint steam train which travels along the main road. This contrivance, which appeared to be a hybrid between the ordinary railway train and the electric tram employed on many seaside piers, was a most extraordinary means of locomotion. The engine itself was almost disguised behind sheet iron, presumably to limit the amount of dust which might otherwise get into the bearings, while three carriages, each fitted with an open portion or observation compartment, in addition to a closed luggage van, made up the whole train.

After a series of snorting shrieks, this imposing vehicle got under weigh, and travelled at a very fair speed along the road, which, owing to the delightfully summer-like spell of weather, was two inches thick with dust! Needless to say these fine particles rose in great clouds, as the suction caused by the moving train affected them, and when viewed from the rear of the last car, we appeared to be running through a tunnel of grey smoke, which a few minutes after starting had covered the inside of every carriage with a thick deposit. Before we had been half-an-hour on the road, we were liberally coated with this dust. Despite the heat of the sun-baked carriages, we dare not open a ventilator for fear of admitting still more, consequently this layer of "soil" ran down our perspiring faces in small rivulets. What with the heat and dust, and the parching thirst which these two created,

I shall long remember that ride through the Haut Savoy. The scenery, such as we could see of it, was extremely pretty and homelike; the Val du Giffre, along which we passed, rising very gently from Geneva, till at Samoëns it attains the height of 2,490 feet.

After three hours and a half of this "luxurious" travelling, pulling up at every wayside station to deposit goods and passengers, we eventually alighted at Samoëns. Having beaten a considerable amount of dust from our clothes, and made ourselves in some degree respectable, we adjourned to a neighbouring café, where delicious honey and coffee tended to relieve our parched throats.

The alpine garden or park, which in 1906 was presented to the municipality of Samoëns, was originally a waterless hillside, covered with a coarse, shrubby vegetation. This ground was bought by Madame Cognacq, a native of that picturesque village, and the famous landscape gardener, Mon. Allemand of Geneva, undertook to transform it from a stony waste to the beautiful garden which is now one of the largest alpine stations in the world.

A sinuous path or "drive" zig-zags up the steep hillside, planted on either hand with beautiful specimens of conifers, shrubs and alpine plants. The whole exhibits a very keen appreciation of the artistic in gardening matters, and clearly shows what beautiful results can be obtained by suitably grouping and placing

plants from different districts, and yet retaining the natural appearance of a rocky alpside.

The whole garden, including several rock-engirdled pools, and a particularly beautiful waterfall, has been carved out of the natural stone of the hillside, and Mr. Frank, who has charge of the immense collection of plants growing there, kindly gave us an interesting account of the work entailed. It appears that over 6,000 lbs. of powder was used in blasting away the rocks to form the paths, roads and pools, and as many as 200 workmen were engaged on this immense task, which took nearly three years to complete.

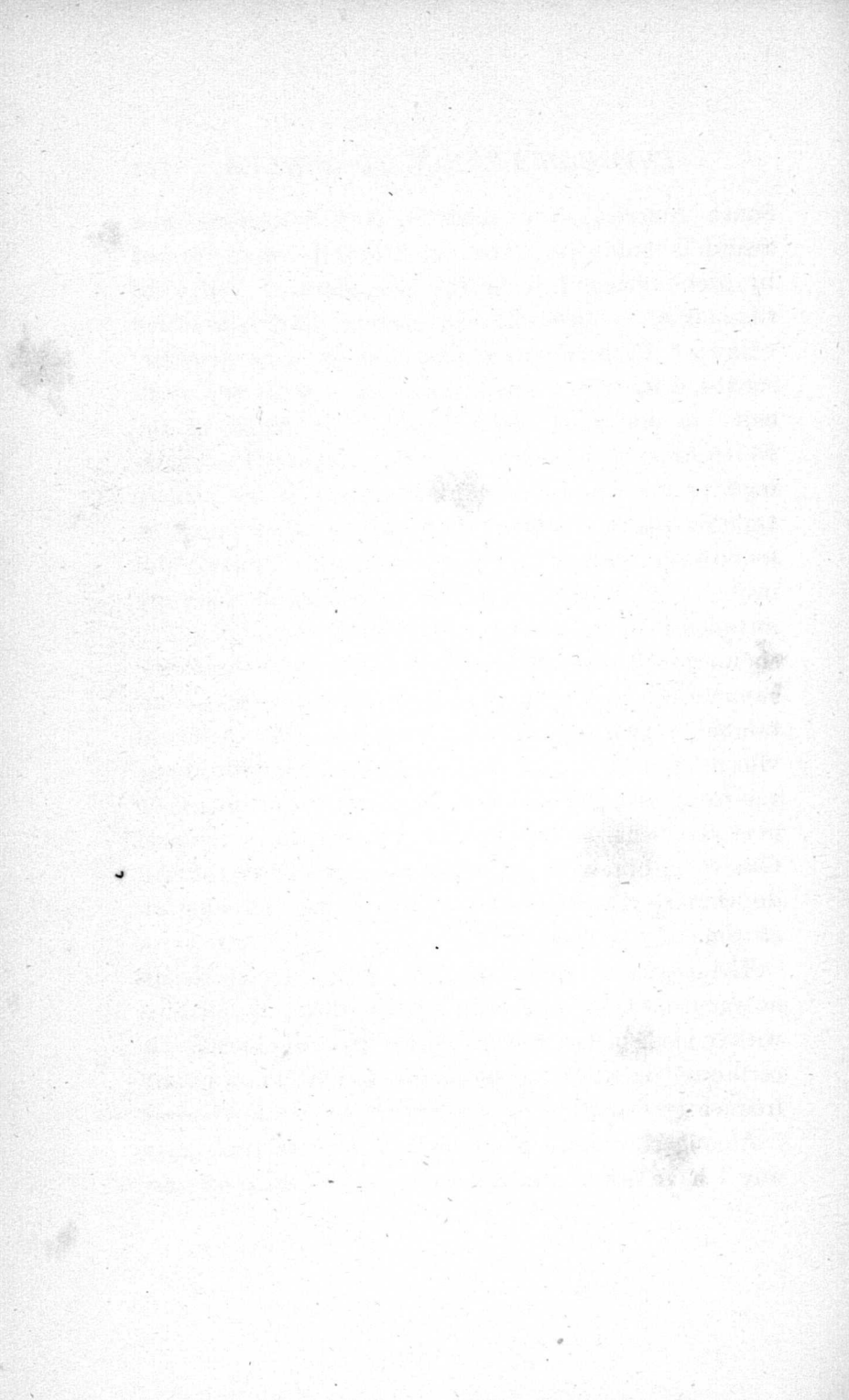
There being no permanent water on the hillside, it had to be brought in pipes from a neighbouring valley. The stream after passing through the various pools, dashes over the waterfall at the rate of 1,500 litres per second. The numerous hydrants, in different parts of the garden, render it easy to moisten the plants when required, the water having a uniform temperature of 41° Fahr.

The park is divided into twenty-five geographical areas, representing the flora of the principal mountain ranges of the world. Here can be seen some of the typical inhabitants of the Alps, from Nice to Trieste, subdivided into Alps, Maritimes, Dauphiny, Savoy, Switzerland, Piedmont, Lombardy, and the Tyrol. Other sections are allotted to the Pyrenees, Apennines, Corsica, Vosges, Jura, Sardinia, Cévennes, Carpathians, Balkans, Caucasus, Himalaya, China, Japan, North and

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VIEW FROM THE JAYSINIA GARDEN,  
LOOKING UP THE GIFFRE VALLEY.



South America, New Zealand, Arctic Regions, and Scandinavian Alps. The Granitic Alps were formed by stone brought from the neighbouring valley of Chamonix, as also was the granite *débris*, in which many of the lime-hating plants were freely growing. As the district is a chalky one, there was some difficulty in obtaining water suitable for many of the North American subjects; this was obviated by collecting rain water in a large tank at the top of the garden. On this rocky shoulder there had existed since the fourteenth century a chapel of quaint design, and instead of removing it, Mon. Allemand skilfully included it in the scheme. The illustration on page 120 shows this picturesque building, and in the distance the summit of the Pointe du Salles—the beautiful mountainous region in which is situated the old-world village of Sixt. From the summit of the garden, some 240 feet above the fine entrance gates, a charming view over Samoëns, and down the Val du Giffre towards Geneva is obtained, while on the left—from the Val du Oddaz, rises the stately Mt. Crion, attaining an altitude of 7,380 feet.

The beautiful appearance of the garden is due in no small measure to the care and enthusiasm, coupled with conspicuous ability, shown by Mr. Frank. It certainly deserves to be more widely known and frequently visited.

Among the many plants which were thriving in a way I have never seen elsewhere, was *Genista horrida*,

a gorse-like plant from Spain, growing on a sunny ledge in the Jaysinia garden, resembling a golden hedgehog, bristling with spines, and covered with its brilliant yellow flowers. Not far away, in a half shady position, was the rare *Spirea caespitosa*, a "dwarf" some two inches high, which one could be pardoned for overlooking as a *Spirea*; there, in a select spot close to the eye it was growing into a considerable patch. Long before we reached it we were aware of the presence of the sweet-smelling *Daphne cneorum*, a beautiful trailing shrub, having rosettes of small leaves surmounted by clusters of rosy-red flowers.

That glorious relative of the above, *Daphne blagayana*, which is such an uncertain plant in this country, though most lovely where it makes itself at home, was in those delightful surroundings spreading over the ground its vigorous trailing growths, covering an area five feet by three feet. Hardly had we recovered from the raptures into which the two hummocks of *Daphne* had plunged us, when we came upon a beautiful colony of the blue Alpine thistle, *Eryngium alpinum*, whose myriad, teasel-like inflorescences, enveloped by the prickly bracts, or involucre, were seen scintillating a little way above us. While I had always known this plant to be beautiful, I had never seen it so gloriously tinted as in that sunny district. The richness of the metallic blue colouring, coupled with the daintily feathered edge of the bracts, was entrancing. The reproduction opposite, though lacking in the chief





THE ALPINE TEAZLE (*ERYNGIUM ALPINUM*).



factor, colour, may serve to indicate the grace and decorative value of this beautiful *Eryngium*.

On the "Granite Alps," *Camp. pusilla* was rambling about among the stone rubble, literally covering itself with its dainty pendent bells, while from crevices in the seemingly inhospitable rocks above peeped forth the fresh green foliage of *Allosorus crispus*, the mountain Parsley fern, mingling its crinkled fronds with the more usual ones of *Cystopteris alpina*. At the base of a large boulder, which partially shaded it from the mid-day sunshine, a considerable patch of *Azalea procumbens* was growing, soon to cover its minute foliage with its wee pink flowers. Upon a granite ledge, some little way from the eye, and resembling a wisp of smoke as much as anything, an avalanche of countless minute white flowers of *Gypsophila repens*, tumbled over the grey rocks, the "rigorous" conditions under which it was growing, merely in a chink of the lifeless granite, having bereft it of the usual ramping habit, and caused it to flower unusually well.

In the Japanese section, the lovely *Iris Kaempferi* were just in their glory, throwing up their tall spikes of huge clematis-like flowers from between the sword-like growths of foliage, which rose from the edge of the stream. Here, too, colonies of *Primulas*, such as *P. Japonica* and *P. pulverulenta*, were thriving as freely as cabbages. On a rocky knoll, a little lower down, beautiful yellow swathes of *Genista myricans*, a mass of blossom, made a brilliant patch against the

grey stones, while nearer the eye, masses of prickly foliage, thickly covered with spikelets of rose-coloured flowers, lay *Acantholimon venustum*, simmering in the sunshine. This charming plant appeared to flourish at Jaysinia even more freely, if that were possible, than in Mr. Dallinges' garden at Geneva. Probably the sunshine is extremely fierce at both these places, during its growing season, and as the plant is a native of Asia Minor, it doubtless requires this "roasting," which in our more cloudy English gardens is so conspicuously absent—in addition to the wet and sodden state the winter usually keeps our plants in, instead of being snugly tucked up under a snow blanket, four or five feet thick, as happens at Jaysinia.

The effective shrub, *Rhus Cotinus*, with its beautiful pinkish-rose coloured fruit stems, which in the distance give it an incandescent appearance, was most effectively placed at several points of vantage, the brilliant climate having induced a wonderfully rich tone in it.

Mr. Frank, who had so courteously shown us over the garden, then took us to see the adjoining nursery, where thousands of baby plants were being reared, preparatory to planting out. Here the skill and love of his plants was plainly evident in the many contrivances which had been made for the management of his large family of alpine.

It is a pity that this fine garden, where the plants grow so luxuriously, does not issue an exchange list of seeds, as do most other botanical collections. It

would serve to make it more widely known, while if the instructional side was extended so as to include a small library and herbarium, it would doubtless make the garden much more valuable to those wishing to study the mountain flora on the spot.

Wending our way back to the entrance, along the beautifully kept inclined slopes, embanked on their upper side by rough stone walls, which were encrusted with colonies of the soft house-leek-like rosettes of *Cotyledon chrysantha* in full bloom, we made our way to the market square of Samoëns, where there exists an enormous lime tree, which is said to have been referred to six hundred years ago as the big lime. The trunk is of immense girth, and the spreading branches cover half the square. Although of so great an age, it appears to be in excellent health, affording a welcome shade from the brilliant sunshine. Close by is the church, also of considerable age, while in the street itself there is a highly decorative water trough, carved out of a huge piece of limestone, into which a sparkling supply of ice-cold water from the neighbouring hill is constantly pouring.

Having heard a great deal about the picturesque situation of Sixt, the village further up the Giffre valley, we were anxious to secure just a peep at it, if nothing more, before our return. As the quaint train service back to Geneva was thoroughly in keeping with the up-to-date character of the line in general, we had little choice as to time of returning, so decided we must

leave Samoëns soon after 9 a.m. the next day. It followed therefore, that if we were to reach Sixt, which is some two hours walk from the former place, we should have to make an early start. We accordingly retired early, giving instructions to be called at 4 a.m.

The morning proved gloriously fine, and the walk along the almost level valley, in the cool delicious air of early dawn, was ideal for our purpose. The scenery was charming, the beautifully surfaced roads being bordered with trees, through which we saw the villagers busily engaged in cutting the hay, despite the early hour, while beyond them the tree-clad hills soared up to the sky line. The quaint scattered villages which we passed were extremely picturesque, the wooden *châlets* being placed at all sorts of angles, while an important feature in all these hamlets was the water troughs or basins. These were cut from solid blocks of black limestone, quarried in the vicinity, and were in some cases beautifully formed and moulded, generally measuring ten feet long by three or four feet wide.

Sixt itself proved to be an extremely old-world place, situated in a steep-sided valley, with mountains of beautiful outline on every hand. Parallel with the street, ran the river Giffre, a swift-flowing milky stream, gambolling over a rocky course. The pleasant murmur of the flood was broken at intervals by a louder "swish," as it tumbled in a rapid over some boulders in its bed. Just by the bridge stood the

church, a stone building with a characteristic turret, upon the summit of which the French cock was flashing its burnished sides. Near by, and indeed probably connected with it, was an interesting building of considerable size, said to have been originally a convent, but now used for the more prosaic purpose of an hotel. The entrance passage to this establishment was deliciously cool and shady, having a groined roof, of evidently ancient workmanship, contrasting strangely with the electric lamp which hung in the porch. The rooms branching off from this corridor were of great size, and had heavily timbered ceilings, while the walls were of immense thickness (over three feet in some places), all formed of the local stone.

Refreshing ourselves there with a very early breakfast, we again sauntered through the street, making several photographs of the buildings, and the scenery around them. In the principal open place, possibly the market square, well planted with lime-trees of considerable size, was another of the now familiar decorative stone water troughs, this time octagonal in form, and carved into panels, with mouldings round them, on each of the eight facets. I was curious to know the meaning of the projecting pieces of metal, shaped something like a T, which were placed in numerous rows on the roofs of all the houses, and was interested to learn that they were to hold the heavy layer of snow during the winter months, thus preventing the whole "cake" from sliding down like an avalanche on to any

unwary pedestrian—when owing to the greater warmth from the building, it might lose its grip of the wooden shingles.

Wending our way back to Samoëns we, in due course, reached the “station,” or rather that portion of the main road from which the hybrid train takes its departure. I noticed that an open truck was attached to the engine this time, containing curious, greyish lumps of stone, and upon enquiring, was interested to learn that this rock, quarried near Samoëns, was very rich in calcium, and after being subjected to great heat, becomes calcium-carbide, used in the production of acetylene.

Taking our places in the train, we were soon whirling along the dusty road as on the previous day, though the track, having a gentle fall most of the way, enabled us to make shorter time on the return journey; we found it necessary, however, to hold on tightly to our seats since the train lurched to an alarming degree on some of the sharp curves. Soon after mid-day we were again in Geneva, and after removing the travel stains (which came away in layers of considerable thickness), we again strolled about the town and also its beautiful lake shore. Later in the day we made up our heavy baggage, and posted it to the Schwarzhorn Hotel at Gruben-Meiden, at the head of the Turtmann valley, which place we hoped to reach later in the week.

The following day it was our intention to visit Pont de Nant, above Bex, and as this would mean some





GENTIANA BAVARICA WITH BUTTERFLY AT REST.



tedious tramping, we did not wish to be encumbered with anything more than we were obliged.

So far our holiday had more than justified our expectations, and if only the weather would "hold good," we anticipated great things from the rambles among the mountains which we were about to enjoy.

The photographic outfit proved highly satisfactory, and I was hopeful of having obtained many records of the scenery about Samoëns, and of the lovely mountain plants growing so profusely in the Jaysinia garden.

## CHAPTER XI

### PONT DE NANT AND MUVERAN

THE most beautiful route to Bex is by steamer across Lake Lemman as far as Montreux, but as this takes considerably longer, we decided to go by train, and reserve the delights of the boat trip until our homeward journey.

Leaving Geneva just after 7 a.m., we travelled to Lausanne, following the northern bank of the lake, and obtaining beautiful views over the water to the south-east, where the Savoy Alps raised their great ramparts to the sky-line, all glittering in the morning sun; while still further away the snowy Mont Blanc was faintly visible. On the opposite side of the train rose the Jura mountains, extending in a blue ridge, parallel with the lake, their lower slopes being covered, mile after mile, with vineyards.

At Vevey station we secured our first view of the Vaudois Alps, an outlying spur of the Bernese Oberland, upon which are situated the Great and Little Muveran, the mountains rising above Pont de Nant which was our immediate goal.

We detrained at Bex, a charming village on the lake-shore, and from there started on the four hours' tramp

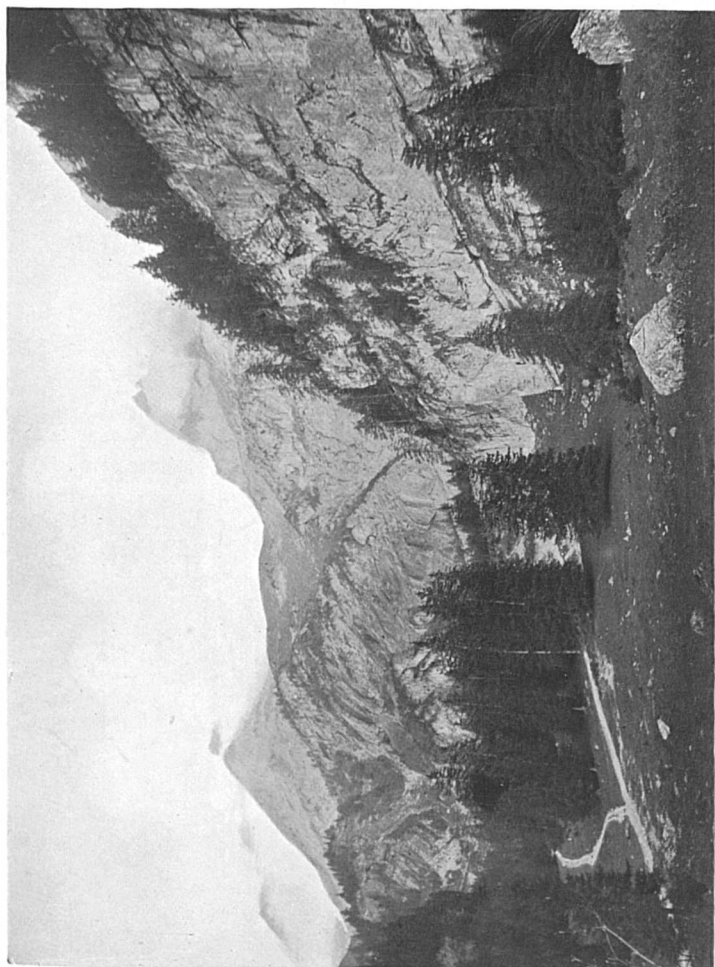
along the hot and dusty road, to Pont de Nant, where the alpine garden, belonging to the Lausanne University, is situated at an altitude of 4,110 feet. The road was an excellent one, though on a continuous incline all the way, and the mid-day sun pouring down upon our backs caused us to appreciate the magnificent woods of fir, beech and chestnut, through which it occasionally passed. To our left, beautiful waterfalls came into view every few hundred yards, as the roaring torrent of the river Alvençon leaped noisily down its rock-bound course. On the stony banks bordering the road, the quaint flattened leaves and stems of *Genesta sagittalis* grew in spreading hummocks, while *Veratrum album*, *Polygonatum verticillata* and *Phyteuma spicata* made the meadows gay.

The crevices in the stone walls, which in places margined the upper side of the road, were occupied by *Asplenium viride*, the dainty little fern commonly known as the Green Spleenwort, and *Campanula pusilla*, the blue hare-bell of dwarf stature, which I had seen so plentifully at Meyringen. From time to time most lovely glimpses of the mountains broke upon us through the trees, while from one point we caught sight of the naked pinnacles, forming part of the Muveran. At one o'clock, after a particularly tiring tramp, we reached the somewhat level valley, shut in by the surrounding wall of mountains, and quite close to the Glacier des Martinet, known as the Val de Nant.

At the primitive little Hotel or Refuge we were able

to obtain ample refreshment, and after a hasty inspection of the University's Garden—which proved particularly rich—we indulged in a thorough rest, preparatory to starting for the Petit Muveran, at the top of which is the Cabin du Rambert, where we had arranged to spend the night, our intention being first to make the climb, and later to return to Pont de Nant, to enjoy a thorough examination of the Alpine garden, and secure a number of photographs of its choice inhabitants.

As the four hours' mountain track to the Muveran was long, and extremely steep much of the way, and as we were not yet in training, we decided to leave the photographic apparatus at the Refuge, taking with us only the provisions necessary for our journey. After a delightful and well-earned rest, in the shade of some large boulders of limestone, which were literally encrusted, on their more shady side, with *Sax. cuneifolia* and *Sax. aizoon* (this latter interesting me, as it is usually considered a sun-loving plant), we started just after 5 p.m., like giants refreshed, for the Little Muveran and the cabin which has been built at its summit. Our track lay northwards, down the Val de Nant, for a short distance, and can be seen in the illustration opposite; then, bearing to the right, wound round the steep pine-clad bluff, which hides it from further view. Then it zig-zagged for half-an-hour among the pine trees, and here grew quantities of *Polygala chamæbuxus* (the Mountain Milkwort), thick with



THE VIEW LOOKING NORTH DOWN THE VAL DE NANT.





its yellow and bronze flowers, and the dainty golden blossoms of *Viola biflora*. Passing thence close to a solitary cow-house or châlet, the last signs of habitation which we should see till the far-away cabin came into view, among the snow-fields of the Muveran. From this point our path struck across more open ground—an upland pasture where the rich juicy grass was rapidly growing under the intense heat of the June sunshine, and yet kept moist by the copious supplies of water from the melting snow above. Here the alp was swept with golden drifts of the Globe-flower (*Trollius europeus*), intermingling with the Aconite-leaved Buttercup (*Ran. aconitifolius*), whose graceful sprays of many-branched flower stems, terminating in a shower of white blossoms, danced in the summer breeze. On mossy cushions, and amid the sodden turf, were legions of the violet-like flowers of the Butterworts (*Pinguicula vulgaris*).

By-and-bye our way mounted more steeply over broken rock, and soon after passing the first snow, we were fairly started on the mountain track—merely a groove a foot or so in width, cut in the precipitous side of the mountain flank, which rose on our left for a thousand feet, and fell at an alarming angle, deep into the valley beneath.

While our path continued along this rocky wall, it at the same time rose rapidly, crossing shoulder after shoulder, in a never-ending succession, while between these buttress-like ridges, in the steeper clefts formed

among them, great tongues of snow still lay, extending right down to the valley at our feet.

A first experience of crossing these snow patches is apt to be alarming, especially as their steepness is often equal to  $40^{\circ}$  or  $50^{\circ}$ , with a sheer slide down for a couple of thousand feet, if one should miss the six inch wide track made by our boots in the snow. This feeling, however, soon wears off, especially if one resolutely keeps his eyes from contemplating the drop below, and fixes them on the path in front. The beginner is inclined to go somewhat tremblingly, clutching at the snow bank on the upper side, and prodding the snow below with his alpenstock. Nothing could be more likely to cause a fall, and if such occurs, only a miracle can save one from a serious slip, since entire control of one's movements is thus lost, and movements in such cases are apt to be surprisingly rapid. If, however, one takes heart of grace, and advances along the apparently dangerous track with some boldness, keeping the eyes ahead, the alpenstock, held firmly in both hands, and prodding the snow above, about level with the knees—thereby resting some amount of weight on it—the procedure is extremely simple, and free from danger, whilst should the snow prove rotten and a slip occur, the alpenstock digs deep into the snow bank, as the climber slides down the incline, and, acting like a brake, rapidly "pulls one up."

The hill-side was in many places ablaze with the rich yellow flowers of *Ranunculus montanus*, a particularly

attractive buttercup of compact habit, while over the crests and ridges, a little above the path, undulating carpets of the Mountain Avens (*Dryas octopetala*), spread in yard-wide masses, glistening with their creamy flowers. With one or two halts for a light repast, we continued thus for some three hours, thinking that each succeeding shoulder, where it was silhouetted against the sky in front of us, must be the last, only to find upon reaching it, a series of others in view.

As we ascended, we obtained magnificent views of the surrounding mountains, while far away, between the interlapping hills, and seen through a soft rosy vapour as the sun declined, the waters of Lake Geneva lay like an opal, whereon were reflected the delicate tints of the evening sky.

On either side of our narrow track great masses of glistening white called our attention to *Ran. alpestris*, that dainty buttercup, with the conspicuous eye, formed by a cluster of yellow stamens ; while spangling the ground in decreasing profusion were the outlying fringes of the myriads of mountain pansies, which had been decking the stony ground most of the way.

Soon our path turned sharply to the left, and mounted yet more steeply, this time over very loose broken rock, where each step displaced a shower of fragments, rendering it very tiring to ascend. Here the violas became less frequent, favouring rather the hollows in the rising ground, where they lay like a blue

mist in the evening light. Along the track-side, nestling in the rocky *débris*, tight flat tufts of *Thlaspi rotundifolia* now came into view, each with abundant heads of rich violet flowers, smiling at us as we passed. This diminutive plant inhabits only the highest stone screes of the alps, and sends deeply into the rocky debris one long tap-root, which seems to defy extraction. If by carefully digging and scraping away the stones it can be collected in anything like an undamaged state (for which purpose the smaller plants are the best), it takes kindly to our English gardens, when planted in deep gritty soil, as in the moraine.

In the gaunt grey crags, which stood like sentinels, jutting out from the slope of broken fragments, we espied, in the now rapidly failing light, tufts of whiteness, and upon closer inspection these proved to be old, old plants of *Androsace helvetica*, wedged into microscopic crevices. In nearly all cases, these plants grew out of the more or less vertical faces of the rock, where, probably years before, seed had been blown and had germinated, sending deep into the cliff its wonderful fine hair-like roots. Having yet some way to go, we were only able to notice these treasures, leaving the gathering of them till our return.

It was now getting quite dusk, and to make matters worse, a thick bank of fog drifted down, enveloping us in its moisture to such an extent that we could only see a few paces ahead. This was the most critical part of the journey, for should we in the half light miss

the track, we might wander about for hours on the waste of stone before again "picking it up," and since at this altitude the nights are bitterly cold, we should have stood a good chance of being frozen. Luckily after stumbling along with extreme caution for some time, a kindly breeze sprang up, and lifted the vapour sufficiently to allow of our proceeding with greater safety.

The track, which by this time was almost indistinguishable (indeed, it is barely perceptible in full daylight), still wound over the loose shale, between occasional large pieces of rock, evidently the rending work of winter frosts over many years—until finally, and much to our delight, just as the last few gleams of the daylight left us, we clambered up the final steps of the topmost ridge, or saddle, and there below us, about one hundred yards distance, situated under the lee of the mighty Muveran, stood the Cabin, with miles and miles of snow-clad slopes stretching away below it, while on every hand stood the silent mountain peaks, cold, grey, in the dim light of the summer night. Tired as we were, we could not fail to be impressed with the grandeur of the scene, which at that hour was so enthralling, enabling one to realize more vividly than is possible in the full light of day, how insignificant and puny is man, with all his boasted achievements!

Perceiving all too soon the biting coldness of the night air at this exposed situation, we made our way,

by means of the faint reflected light from the surrounding snowfields, down the steep stone slope, to the hut, finding the downhill "going" a great delight, after the heavy and continuous incline of the ascent. Aching, as we were in every limb, from the unaccustomed labour, it was the work of only a few moments to chop the wood already stored in the hut, light the fire in the stove, fetch the water from an adjacent half-frozen rill, and set it on the hob to boil. Although we were without milk, and had to be content with saccharin tabloids, in lieu of sugar, no tea was ever so welcome and refreshing as our hastily made brew. When justice had been done to a portion of the provender from our rucksacks, we ascended the wooden ladder to the upper regions, or loft, where the sleeping accommodation, in the shape of two long troughs, capable of containing fourteen or eighteen persons, side by side (like sardines), was situated. Very snug these Alpine huts are, too, despite the roughness, and immensely welcome to the tired wayfarer. Pillows and thick woollen blankets, stacked neatly into an overhead rack, rendered it possible to keep quite warm as we lay on the sweet-smelling hay, despite the biting air of the mountains—and, as we dozed off to sleep, the wind howled and moaned about the hut as though enraged at this contrivance of man to protect its legitimate victims from its fierce and icy wrath.

The morning found us greatly refreshed, and possessed with ravenous appetites. We turned to, and

relit the fire, procured fresh water—a tedious occupation this time, as hardly a trickle came from the almost congealed, soil-stained, streamlet, which at midday issues from beneath the snow—and proceeded to prepare our meal. In these cabins, which as I have said are far from elaborate, there is a good stock of knives, forks, plates, kettles, and other cooking utensils, so that even in the case of amateur house-keepers, such as ourselves, there is no excuse for faring badly.

The morning had broken somewhat grey and uncertain, though it cleared to some extent while we were breakfasting, and our spirits accordingly rose at the prospect of continuing our way across the mountains to the “happy hunting ground,” where the limestone and granite unite, which I have already referred to. It is difficult for the lowlander to realize how the plant collector is the absolute slave of the weather, which in these high places is apt to be excessively changeable. If caught by bad conditions—such as rain or fog, when plant-hunting on some scree—even though only a few yards from the faint track, running like a ribbon among the rocks, which is all that leads back to civilization at many high altitudes, the chance of regaining that precious thread is extremely small! Should snow fall, as it frequently does, with only a few minutes’ warning, one needs to know the district well, to retrace one’s steps over the mountain shoulders which have such an amazing resemblance to one

another, and upon whose surface the path has been entirely obliterated, perhaps for days to come.

Unfortunately for us, the improvement of the morning was of short duration, and by the time we were ready to start at 7.30, it commenced to rain, and had every appearance of so continuing.

As the weather had for some days past been so uniformly summer-like, we had brought only enough provisions to last us for thirty hours, so that the stormy interlude compelled us to change our plans, and retrace our steps of the previous night, returning to Pont de Nant by much the same way as we had come. This was the more disappointing, as the way up to the hut (as we anticipated) proved to be far from rich, and was merely an incident in the more extended excursion we had planned. However, as there was no choice, we had to make the best of it, and clad in waterproofs, we left our welcome shelter, after replacing the utensils as we found them, and started up the slope, which we had descended so thankfully the night before. All over this stony incline were mats and masses of the purple Saxifage (*Sax. oppositifolia*) in varying depths of colour, and flourishing in the utmost profusion, whilst in many places small loosely growing clusters of *Linaria alpina* lifted their pretty snapdragon-like flowers a few inches above the rocky *débris*. Just below the crest of the ridge, and on the further side we came suddenly upon one little solitary tuft of *Campanula cenesia*, just opening its flowers.



Of all the many members of this large family, none are more charming than this wee bell-flower, which makes, in the mountains, dense tufts of bright green rosettes, of somewhat oval leaves. The funnel-shaped flowers, of a clear pale blue, are extremely brilliant as they nestle closely to the dwarf foliage, rising only two inches or so above the ground. While decidedly a plant for the choicest parts of our rock garden, it is by no means difficult to grow if given a deep, gritty compost, and I have been successful with it in my moraine until, alas, the slugs got wind of its delicious growth, and promptly, in a single night, cleared off the whole of my plant. I need hardly say how I longed for my camera, and regretted having been obliged to leave it in the Val de Nant, for this little plant, packed between two slabs of rock, embedded in the surrounding broken chips, would have made a delightful picture. Search as we would, we did not find a sign of any other plants in its vicinity, and the rain coming down more heavily, caused us to seek shelter under the lee of a cliff further down the track. At intervals during the downpour we explored the large rocks which had stood out so gaunt and naked in the evening light, and made a closer acquaintance with the sweet little *Androsace helvetica*, with its soft woolly tufts of foliage, each growth of which terminates in one primula-like flower—white in colour with a yellowish eye—and twice the size of the wee rosette which bears it. It seemed almost incredible that any plant could secure a footing on the

vertical sides of such rocks, where crevices appeared entirely absent, or at best, needed a microscope to discern them. Here, exposed to the full blaze of the fierce sunshine during the greater part of its short season, and partially protected from overhead wet by its situation, the curiously coral-like clusters of growth were one mass of blossom, looking like white daubs on the brownish grey cliffs. Here again I sadly missed the camera, though it would have been a difficult task to have placed it in such a position as to command these pretty tufts, most of which were only just reachable by clinging to the rocky wall like a fly. With some amount of gentle coaxing, aided by my companion's ice-axe, we managed to secure a fair number of plants, in many cases indifferently rooted though, since the rock in which they grew was adamantine, and the roots of the tufts so dainty, that they easily broke. A fair amount of success, however, has attended planting very firmly the more or less rootless pieces, into moist silver sand, mixed with leaf mould, after breaking up the clusters of growth into small tufts of a few rosettes apiece. Having kept them for some time in a "close" frame, shaded from the fiercest rays of the sun, a proportion of them seemed inclined to dwell (at least for a while) here in my garden.

As we saw on the previous night, *Thlaspi rotundifolia* was liberally strewn about the steep accumulations of decaying rock, and despite its immensely deep roots, could be extracted in comparatively good condition by

the exercise of some patience. The small roundish leaves, almost hidden by the clusters of four-petalled flowers, made a very cheerful, though not brilliant display, among the surrounding desolation.

As we descended, *Viola calcarata* became more and more abundant, making gay splashes of rich violet among the rocks where the slope was sufficiently gentle to permit of the short turf, through which the viola loves to grow, obtaining a permanent foothold.

The glorious views away to the south-west, which had so impressed us the previous evening, were, alas, all obliterated by the swathing masses of billowy clouds which drifted, sometimes near and sometimes rather farther away, but all the time depositing their chilly moisture upon us, and obscuring our vision for more than fifty yards.

The lower slopes of the mountain flank, whose more lofty portion we were traversing, were completely hidden, thus rendering the crossing of the snow patches apparently less risky, despite the somewhat sloppy condition of the snow.

On the previous evening we had found the edges of these patches, where the snow and alpside met, difficult to negotiate, since the former often bridged a cavity, due to the more rapid melting underneath, and into these holes or "rotten places" it was extremely easy to blunder. It is said that the chamois, when crossing such spots, always leap the first and last eight or ten feet, thus avoiding the difficulties which mere man is obliged

to encounter ! On this soaking morning our troubles were by no means lessened, owing to the rain having made the snow even less trustworthy than it had been the day before, and several times we dropped through what appeared to be solid snow, thus adding a liberal coating of slush to our already sodden condition. It was no easy matter, either, to extricate oneself from a hole about five or six feet deep, bounded on one side by a steep declivity of the slippery ground, and on the other by a perpendicular wall of snow, which collapsed as soon as touched, and this at the beginning of one of the enticing (?) snow slopes referred to previously, whose lower extremity was lost to view in the rain-shrouded distance.

By the time we had been an hour and a half on the way (I almost said road), the weather made a definite change for the worse, and it rained and rained as I have only seen it rain in the mountains, while the thunder crashed and reverberated from one mountain barrier to another in a tumultuous roar, which rendered it quite impossible to carry on a conversation. The lightning, too, was intensely vivid, while hardly had the flash passed before the report crackled out immediately overhead, seeming to make the very ground tremble.

Luckily, during our ascent on the previous day we had noticed a rocky cleft, with an overhanging ledge, said to have been used by climbers to pass the night in, prior to the building of the cabin at the summit,



LOOK! CHAMOIS !!



and for this shelter we made a dash, and from its kindly portals were able to enjoy the tumult without, in considerably more comfort than if we had been obliged to continue stumbling onward through the lashing rain.

Beguiling the time by a fresh attack upon our provisions, so making room in our rucksack for a further stock of plants, should we be able to collect them, we awaited a lull in the storm, and then restarted on our downward tramp.

By this time the track had become decidedly moist and slippery, considerable caution being needed to avoid a too sudden descent. As the rain again thickened, when the milk *châlet*, or cow house, hove in sight, we decided to make a pause there. The inhabitants of these quaint and ramshackle places usually consist of one or two men, who tend and milk the cows and goats, after bringing them up to these high, rich pastures or alps, and are very kindly people. Our rough-looking host rapidly knocked the fire together, and soon had a welcome blaze roaring up that portion of the establishment called by courtesy the fire place, the volumes of smoke, driven off from the slightly moist logs, spread in a thick canopy over us, and such as did not go down our throats eventually found their way out through the chinks between the shingles, and a small portion by means of the hole in the roof, which should have acted as a chimney. Slight inconveniences of this sort, however, were altogether lost sight of in the cheerful glow which radiated from

the fire, around which our soaking mackintoshes were steaming, while we crouched as close as possible to induce our lower extremities to dry, and after a short while we were able to enjoy a pleasant feeling of warmth through our sodden boots. As much milk as we could drink was pressed upon us, and I have rarely tasted anything so rich and delicious, doubtless due to the luscious feed which the cattle obtain on those high pastures.

After raining in torrents for some three-quarters of an hour, the weather cleared to a small degree, so with many thanks to our host we took advantage of the lull to complete the descent to the Refuge, paying little attention to the plants that grew by the wayside, our chief aim being to reach permanent shelter before another downpour overtook us.

A good square meal, of which we partook soon after our arrival at Pont de Nant, rapidly banished all the unpleasant portion of the trip from our memories, and left only the impression of the magnificent scenery among the solitary snowfields of the Muveran, an impression graven deeply into our recollections, and indelibly associated with the choice plants growing in those wilds, and the delightful though fatiguing scramble over the high rock-fall by night.



## CHAPTER XII

### PONT DE NANT

DURING the few days that we spent in this locality, we enjoyed many pleasant walks in its vicinity. The valley appeared to be a very quiet, out-of-the-way place, except on Sundays, when many of the peasants from neighbouring villages came up to it as a pleasure resort, while occasionally we saw large parties of school children being taken by guides for long tramps over the mountains, for educational purposes, and they not infrequently called at the Refuge *en route*.

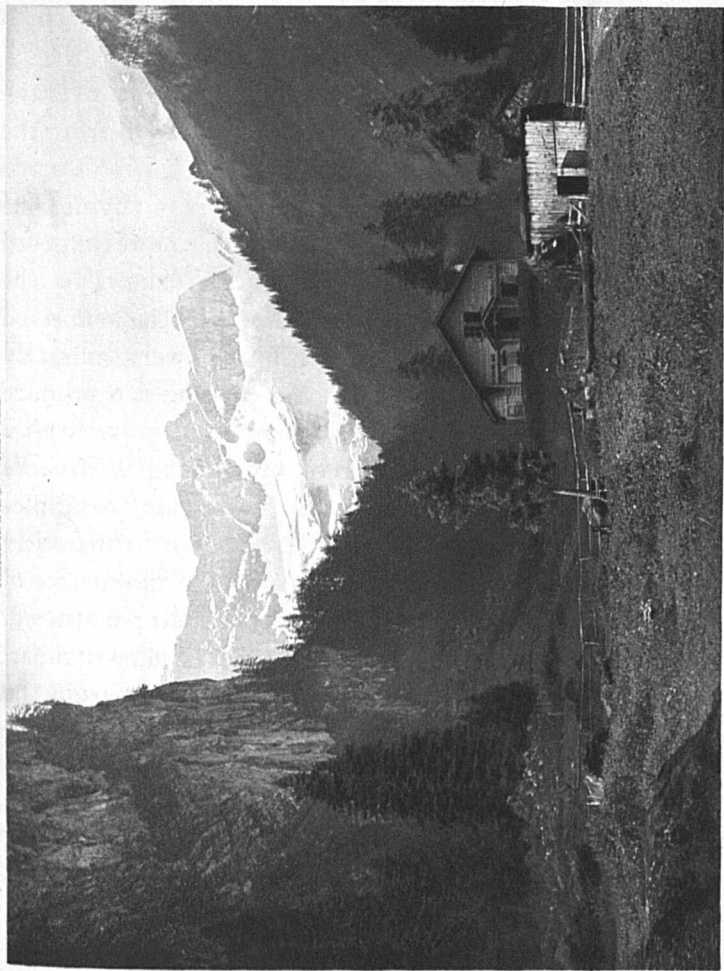
The tolerably good track up the sinuous valley towards the glacier (see page 148) was extremely pretty, and quite gentle in incline, passing for a considerable distance merely a few feet above the river Nant, which dashes in spray-enveloped rapids over the many rocky obstructions in its course. The track winds as a woodland path between pine trees, many of giant stature, which sweep down from the rocky heights on either hand, in a succession of graceful curves, as shoulder after shoulder of the interlapping hills come into view, while ever in front of us, and seemingly as far away as when we started, the glittering, snow-covered glacier, shimmered in the cool evening light, with, now

and then, thin wisps of long-drawn vapour mantling the bare faces of the abruptly rising peaks, which reared themselves on either side of it.

On the boulders, which were liberally strewn over the level valley, evidently having been broken off from the rocky walls which bounded it, *Saxifraga cuneifolia* made verdant mats of foliage, while the common thyme, one mass of brilliant flowers, mantled the more exposed knolls. Spreading upward from the turf on to the boulders, the close-hugging branches of *Globularia nana* were bejewelled with their rich blue flowers, infinitely more decorative than our utmost coaxing can produce in our English gardens, while among the grass itself a tracery of silvery-edged leaves proclaimed *Alchemilla alpina*. In this secluded glen we found many examples of vigorous young pine trees, which had apparently germinated upon the moss growing over the surface of huge boulders, and into them the roots had penetrated, rending the hard stone in a most extraordinary manner.

After dinner, on the evening of our return from the Muveran, we took a gentle stroll before retiring to the room which we had engaged in the primitive Refuge, it being the only accommodation within reach. We were somewhat disturbed during the night by curious and inexplicable noises, which occurred at intervals, sometimes resembling, to our half unconscious senses, distant thunder; and we dreamily supposed that the storm had returned. Later on, we discovered, much to our surprise, that those odd sounds we had heard,

HEMDEHANTZ GRAVURE



VIEW SOUTHWARDS ALONG THE VAL DE NANT

The following is a list of the names of the persons who were present at the meeting held on the 15th day of June, 1880, at the residence of Mr. J. H. [Name], in the town of [Name], County of [Name], State of [Name].

[The text is extremely faint and largely illegible. It appears to be a list of names and possibly addresses, but the characters are too light to transcribe accurately. The list likely includes names of attendees and their respective locations.]

and the all-pervading perfume which greeted us when we awoke, were explained by the fact that our room was a kind of panelled loft above that part of the premises occupied by the cows, of which the Refuge boasted a goodly herd!

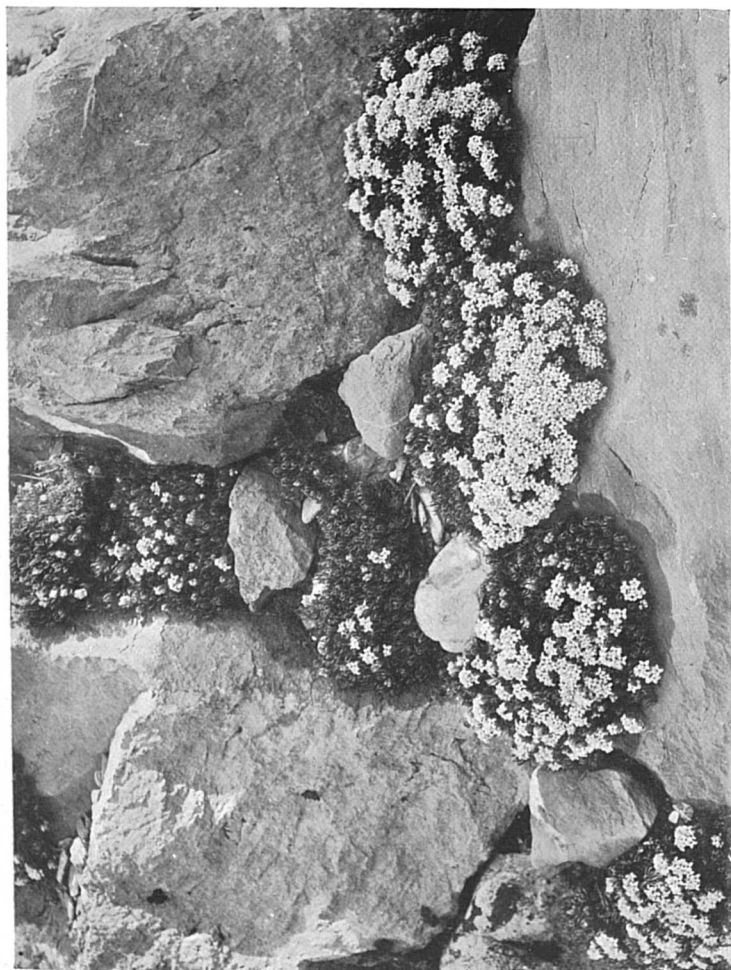
Much to our joy the morning broke gloriously sunny, and though the air was still cool, and the grass extremely wet, it was delightfully crisp and refreshing, as we prospected before breakfast. Whilst this meal was being enjoyed under the verandah, much of the time was occupied in hustling away the chickens, which seemed to imagine that they had as much right to the chairs, and even tables, as we had. When we had successfully dispersed these feathered visitors, driving them clear of the enclosure, we returned to our places, only just in time to prevent our eatables being cleared off by three pigs, which had found their way in through a broken railing! Breakfast under these circumstances was rather exciting, and we decided that it would be advisable to take our meals indoors for the future.

Later on we adjourned to the neighbouring Alpine garden, owned by the Lausanne University, and cared for by a curator, Dr. Wilczek, and his assistant, who reside, during the summer months, in a picturesque chalet adjoining. The garden itself is situated under the lee of the eastern mountain wall, as may be seen in the reproduction on page 148, though it is fully exposed to the sunshine from nine a.m. till dark, while the cool and often icy winds from the glacier

blow straight down on to it, thus rendering its position equivalent to that prevailing at a considerably higher altitude.

Though not presenting anything remarkable from the scenic point of view, the way in which the various mountain plants (not merely from Switzerland but many other Alpine zones) thrive in that garden, was surprising, and made us (being keen Alpine gardeners) anxious to secure a similar piece of rocky ground with the same delightful setting of pine-clad mountains, glacier, stream, and snow-fields. Mantling the rock-slopes or wedged into crevices or vertical fissures, were myriads of Alpine jewels, growing quite as luxuriously as in the most favoured spots of their native mountains. We found patches of the Alpine pink (*Dianthus alpinus*) three feet square, one blaze of colour, their large rosy flowers, scarcely one-and-a-half inches high, obliterating the tufts of glossy leaves. Undulating hummocks of *Alyssum alpestre*, a sheet of burning gold, while with tight cushions of silver, *Sax. crustata* mantled the rocky crevices, throwing out to the morning air its dainty spikes of white flowers, supported on ruddy green stalks.

Round one rocky headland we came suddenly upon a charming colony of *Ran. parnassifolius*, with its rich bronzy green, heart-shaped leaves, and snowy cups of satin, while between and around the parent clumps thousands of seedlings were pushing up their baby noses, showing how extremely happy the plant was



AN ALPINE WOODRUFF (*ASPERULA GUSSONI*) AT PONT DE NANT.

(See page 151.)



*DIANTHUS GLACIALIS*, VARIETY *GELIDUS*.



in this mountain garden. On a low rock bed, in full sunshine, rather opposed to the position usually suggested as necessary, where its pure colouring could be easily seen and admired, was a group of that particularly choice pink, *Dianthus gelidus*, a form of *D. glacialis*, having the same narrow foliage as the type, and pure pink, beautifully modelled flowers, slightly spotted with white at the throat. Unfortunately the heavy rain of the preceding day had, to some extent, damaged many of the plants, only one being good enough to photograph. The illustration opposite, however, shows how happily it was growing, seemingly quite as easy and good tempered in this enchanting spot as *D. neglectus* is with us in England, and this latter, by the way, grew like a weed at Pont de Nant.

Not far from this lovely pink, and rising some eighteen inches from the ground, above the decorative foliage, the clustered flowers of *Anemone narcissiflora*, with rose-flushed backs to each petal, looked very stately, evidently appreciating the cool compost of *extremely* gritty soil, which was everywhere used in that garden. From both vertical and horizontal fissures, level with the eye, peeped forth *Asperula Gussonii*, its close green cushions of curiously incurved narrow leaves one mass of wee pink flowers. The masterly way in which these tufts had been planted, and carefully wedged in with pieces of stone, was one which could be followed very closely in our own rock gardens with great advantage, since the effect thereby obtained

was most beautiful and natural, as will be seen by reference to the photograph on page 150. Scrambling about in stony rubble, at the base of some large blocks, was the choice little mountain viola, *V. hetrophylla*, whose purplish-violet flowers glowed prettily against the cool grey of the rocks.

In one part of the garden where a rather bolder formation lent itself to decorative planting, the rocks were literally encrusted with such gems as *Edraianthus pumilio* (a close relative of the bell-flower), hiding its silvery cushion of dwarf grey leaves under rich purple flowers; *Arenaria junipifolia*, growing in an avalanche over the rocks; *Sax. cochlearis*, in close-packed hummocks of silvery rosettes, *Arenaria purpurescens*, one starry mass of pink flowers, almost obliterating the leaves, while as large globular bosses, in some crevice openings, where the roots could run through into the cool soil behind, were wonderfully flowered tufts of *Dianthus tener*, *D. frigidus*, and *D. furcatus*. The *Ed. pumilio* was so charming that I made a large scale photograph of it, and the picture appearing opposite indicates how joyously it flowered, vying with *D. frigidus* (see page 153) as to which should make the most attractive display.

At the eastern side of the garden, spreading over the rocks in a patch five feet long, was a magnificent piece of *Dryas Drummondii*, one mass of yellow flower, which even in this ideal position did not open fully—rendering it much less decorative than the more common



EDRAIANTHUS PUMILIO (SYN. WAHLENBERGINA PUMILIO).



DIANTHUS FRIGIDUS IN ALPINE GARDEN AT PONT DE NANT.  
(See page 152.)

Mountain Avens, which we passed on the way to the Cabin du Rambert.

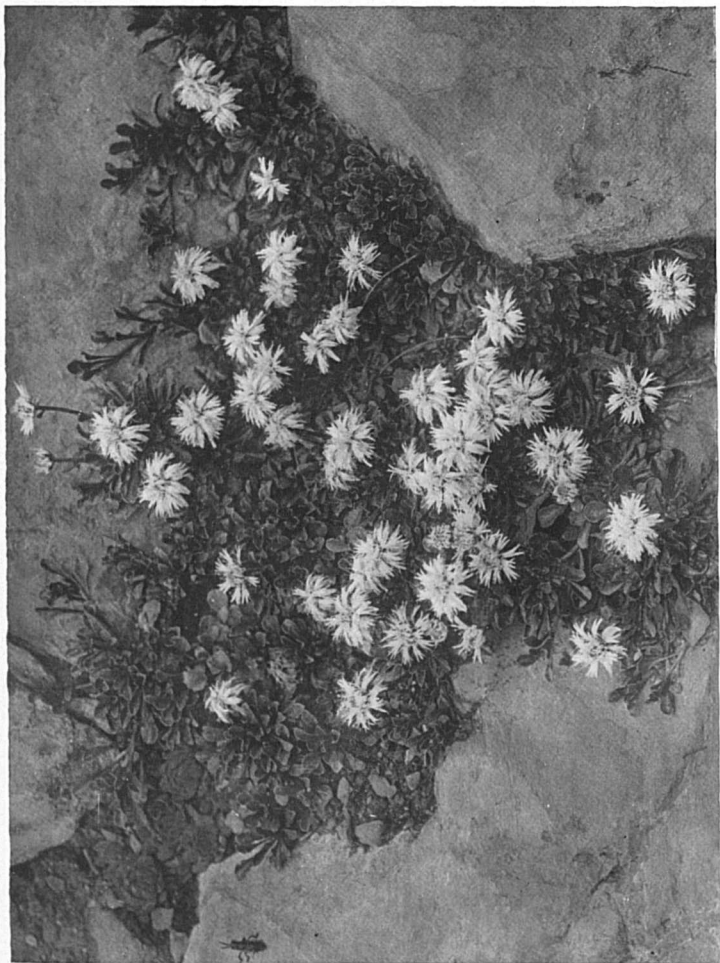
Spreading over the masses of stone on a sunny ledge, we came upon a particularly beautiful mantle of *Globularia bellidifolia*, whose close woody stems, furnished with tiny leaves, clung lovingly to the cool support, while upon this dark, bronzy-green background, the pretty blue flowers stood up in striking contrast. One thing was being constantly brought to our notice, and that was, the immense number of crickets or small grasshopper-like insects which chirped in chorus in every part of the garden, and upon developing the exposure I made on the *Globularia*, I was surprised to notice one seated to the left of the plant, as though waiting to be photographed, see page 154.

*Æthionemas*, pink crucifers, somewhat resembling a refined *Iberis*, were glorious in the display they made. Such choice forms as *Æ. Thomasianum*, *Æ. coridifolium*, and a hybrid between the latter and *Æ. grandiflorum*, made delightful patches of colour, in some cases falling prostrate over rocky ledges. The portrait of *Æ. coridifolium*, which appears on page 155, shows how strikingly beautiful it was.

Other choice plants which adorned this garden were *Asperula hirta*, a woodruff of dainty grace, *Campanula thyrsoides*, the erect bell-flower of pale cream colour; *Matthiola pedemontana*, a pale lilac-coloured relative of the Stock, with hoary foliage; *Onosma sericeum*, a "golden drop," having delicately tinted yellow

blossoms ; *Phyteuma sieberi*, a spidery flower of rich bluish purple, closely allied to the Campanulas, though looking so unlike them, and the rich pink flowers of *Androsace primuloides*, rising from a host of baby offsets, scrambling over the adjoining ground, and attached to the parent rosettes by reddish, strawberry-like runners, covered with hair.

I was interested to notice that the feature which is dwelt upon in so great a degree in modern rock garden building, *viz.*, the rigid observance of the "lie" of the strata was entirely absent in this garden. It appears to me that undue weight is being given to this rule in construction, for in the majority of cases the plants found in the mountains grow, not so much upon the living rock, as on the accumulation of pieces which have been broken off from it, thereby forming rock-falls, moraines, screes, or thinly turf-surfaced alps ! While it may add to the appearance of gardens of large extent, similar to Sir Frank Crisp's beautiful Alpinum, at Friar Park, Henley, where, of necessity a portion of the effect is obtained from partially unclothed masses of rock—imitating bare faces of the hillside—in the average garden little or no result can be hoped for from such puny attempts to simulate ranges of mountains. The desire should rather be to decorate the small space available with the richly coloured flowers which characterize the higher alps, and these do not as a rule exist in the steep and effective walls of rock which show the strata so clearly.



GLOBULARIA BELLIDIFOLIA AT PONT DE NANT.

(See page 153.)

arching trees, blue mountains, and the still bluer sky.

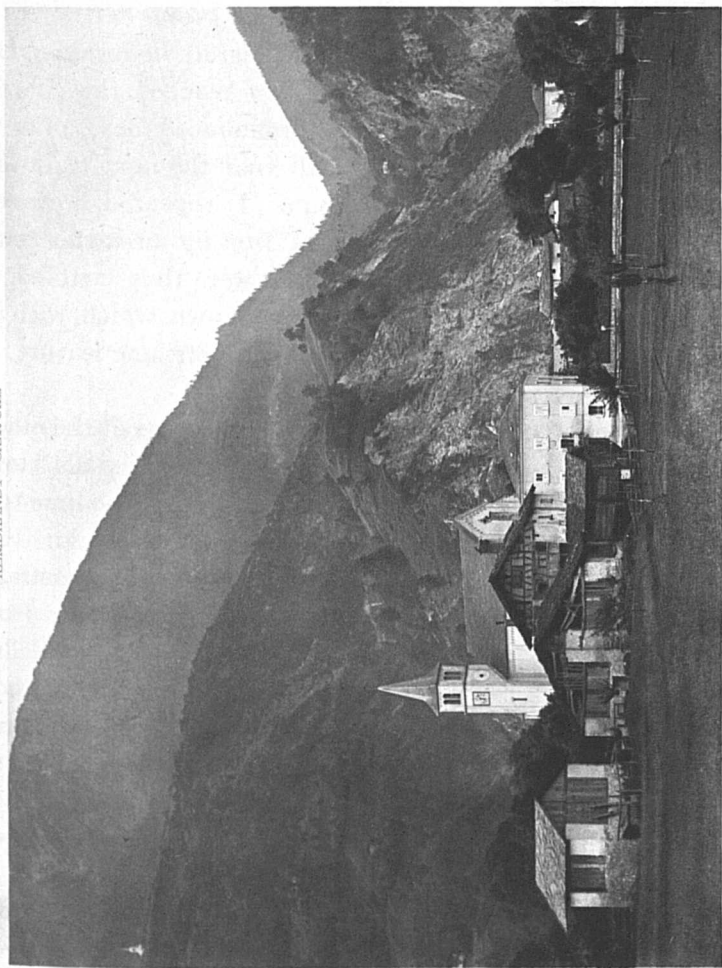
Leaving this lovely path with regret, we regained the coach-road, and about mid-day reached the charmingly situated town of Bex (pronounced Bay), only to learn from the station officials that the next train left there for Turtmann at 5.46 p.m. It appeared, however, that we could travel as far as Sion by an earlier one, and this we decided to do. We were thus enabled to spend some time in that quaint old town, which, with its castles on isolated hills, forms such a striking feature, as one traverses the Rhône Valley.

Sion itself is very picturesque, and some of the older, steeply rising streets, with their covered stalls along the kerb, are quite Italian in character. The lime tree promenades, too, are delightfully shady, as the knotted, large-leafed branches of the trees spread horizontally over the sidewalk, protecting the pedestrian from the fierce heat of the sun, which in the Rhône Valley in general, and at Sion in particular, is amazingly hot.

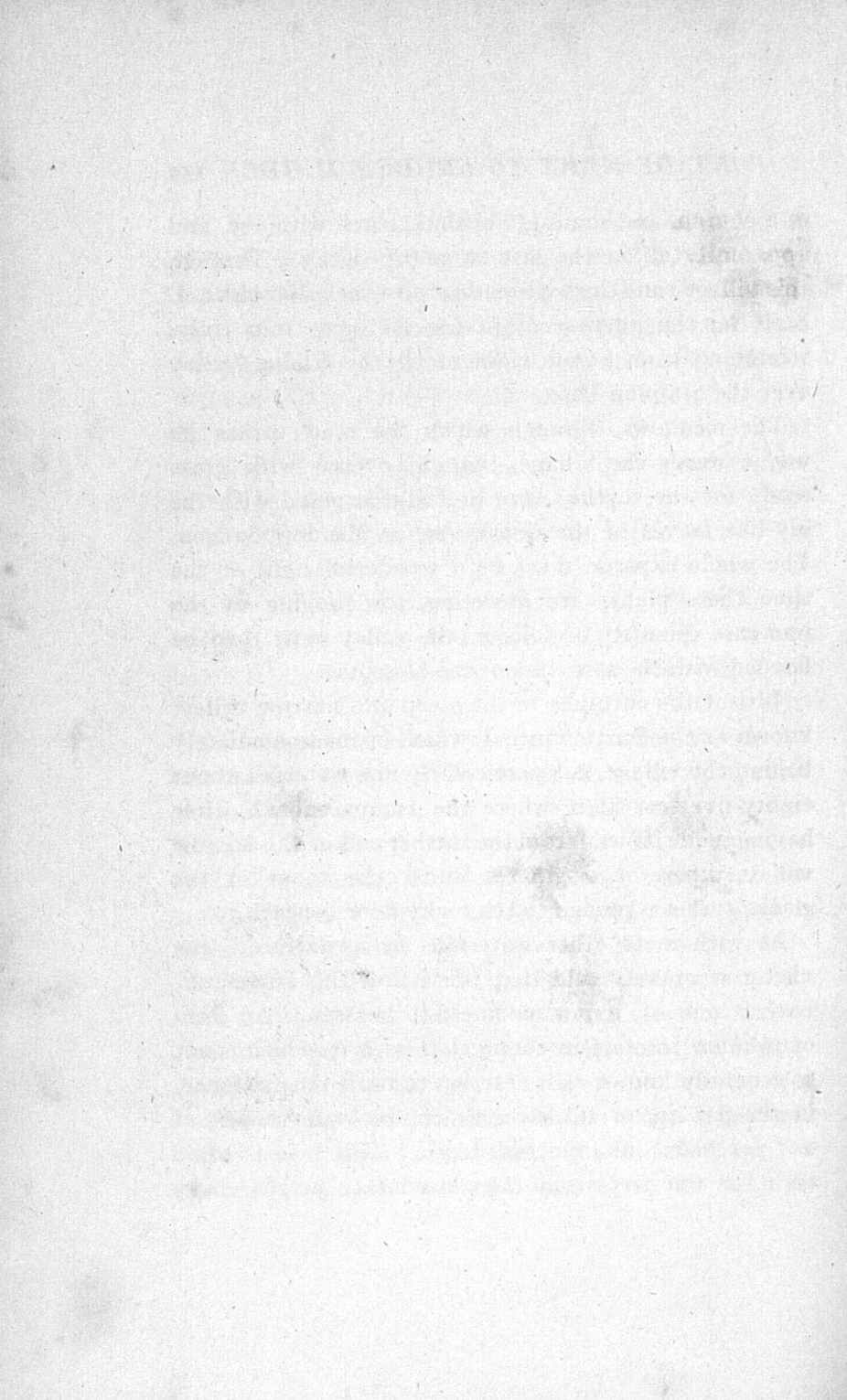
After exploring the town, and noting the many beautiful views across the valley, to the glittering snow-caps of the Valais, we wended our way to the station in time to catch our train to Turtmann, where we proposed to spend the night, reaching there just at twilight. The village, which is half a mile or so from the railway, and on the opposite side of the level-bottomed Rhône Valley, is an old-world place, as will be seen from the illustration opposite. It consists



REMBRANDT GRAVURE



THE VILLAGE OF TURTSMANN, VALAIS



of a church, and some 150 châteaux, black with age, and apparently all in the last stage of decay. Through this village runs the well-made road which Napoleon I. built for the purpose of taking his army into Italy, stretching from Savoy right along the Rhône Valley over the Simplon Pass.

The meadows, through which the road makes its way towards the village, though covered with grass ready for the scythe, were literally carpeted with the lily-like leaves of the *Colchicum*, or Meadow Saffron. The whole expanse must be a wonderful sight at the time these plants are flowering, for, judging by the immense quantity of foliage, the valley must then be flooded with the soft tints of the blossoms.

Just at the entrance to the steep and narrow valley, known as the Turtmannthal, which opens immediately behind the village, is a particularly fine waterfall about eighty-five feet high, where the Turtmannbach, after having made its way from the further end of the narrow valley, where it originates under the snout of the glacier, takes a plunge to the rocky floor beneath.

As with most other waterfalls in Switzerland, the visitor is gravely told that this fall of the Turtmannbach is one of, if not *the* finest to be seen. An item of peculiar interest in connection with it, which is not so generally known as it deserves to be, is the existence, in the flat lip, or sill, over which the water pours, of a "pot hole" of immense depth. This hole is some eight or ten feet from the actual face of the rocky

wall, and was first discovered in a curious manner. A cow, which fell into the stream just where it is about to take the huge plunge, and where the water races with immense force and speed, failed to go over the fall, as was naturally anticipated, it having been arrested by something within a few feet of the whirling water where it shot over the edge. After some trouble, the animal was hauled out, and one of the more venturesome villagers volunteering, he was lowered by a rope from each side of the stream, to within a few feet of its surface, and then with a long pole, tried the depth of the water, and nature of the bottom. Much to his surprise, when he reached the place where the cow had become jammed, his pole went right down into the rock.

The very probable assumption is, that this "pot-hole" was formed originally by a pebble working a small depression in a softer part of the rocky bed, thus getting into a declivity from which it could not escape. Being continually urged round and round by the rushing water, it wore a larger hole for itself, until it was ground to pieces, when others would take its place. The wearing action over long periods would eventually form a "pot-hole" much like those we saw examples of at Lucerne; this in course of time would be of huge dimensions. The villagers fear that some day the face of the rock may fall out, owing to the large hole drilled just behind it, and this will probably have the effect of causing the water to descend in two cascades

instead of one large one. Evidently the cow, which first drew attention to this curious phenomena, was caught at the edge of the "pot hole," and so was able to resist the onward thrust of the water, until rescued.

Many were the subjects for the camera, as we wandered along the crooked streets of Turtmann, and noted the dark and weather-stained houses, and decorative overhanging eaves, broken at intervals by the verdant leafage of some ancient tree, or the broad foliage of the vines, which were frequently trained over the out-buildings.

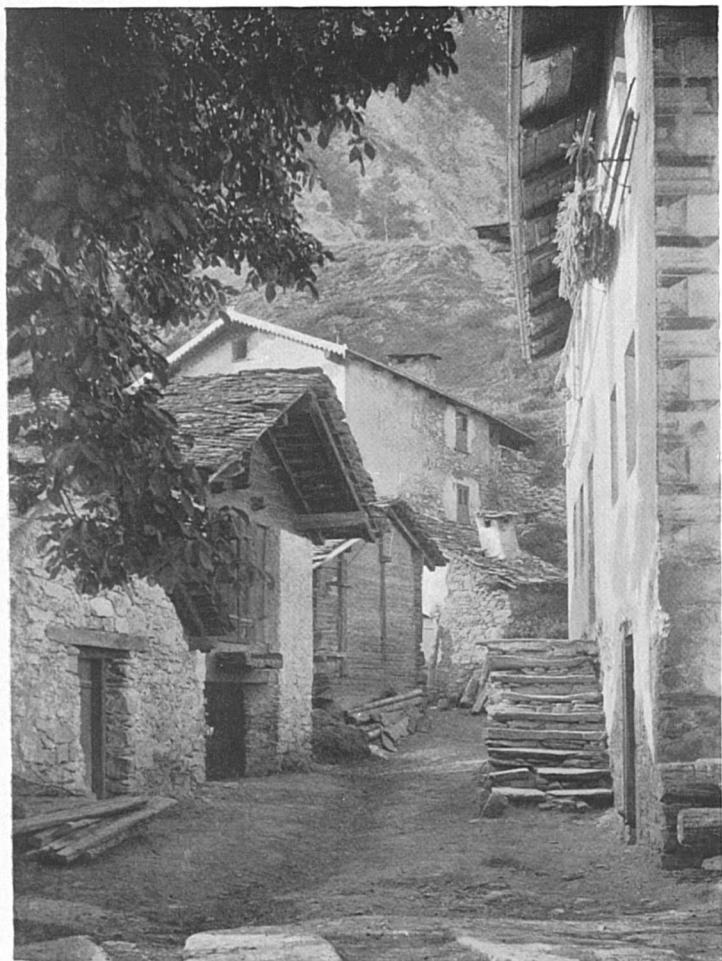
Probably the high summer time is the most pleasant period in which to visit Turtmann, since I noticed the majority of the streets were generously supplied with stepping stones, and as the surface of these roads appeared to be soft and spongy, obviously "metalled" (?) to a large extent with the clearings from the numerous cattle sheds, which form the ground floor of many of the houses, I should imagine that in the wet season and when the snow is melting, the roads are hardly as pleasant for pedestrians as when I was there.

Here, as in the Oberland, the Föhn, a hot strong wind, coming over the Simplon from Italy, is greatly dreaded. At its approach the Church bells ring, and immediately the fire in every house has to be extinguished, and no smoking is permitted in the streets, except in a covered pipe. Among these ancient time-worn, wooden châteaux, the merest spark, carried by this Föhn wind, will spread destruction far and wide.

The proprietor of the hotel at which we spent the night, told me of a village a mile to the west of Turtmann, consisting some years ago of 350 châteaux, which caught fire one night, when the dreaded wind was blowing, and despite the heroic efforts of the villagers, when morning dawned, one châteaux only remained. It is difficult for us, who live in modern cities, where the buildings are, to a large extent, non-inflammable, and where the most up-to-date fire-fighting appliances are always at hand, to realize the pitiable condition of these Swiss peasants, when, not merely their own, but all the neighbouring houses were burnt out.

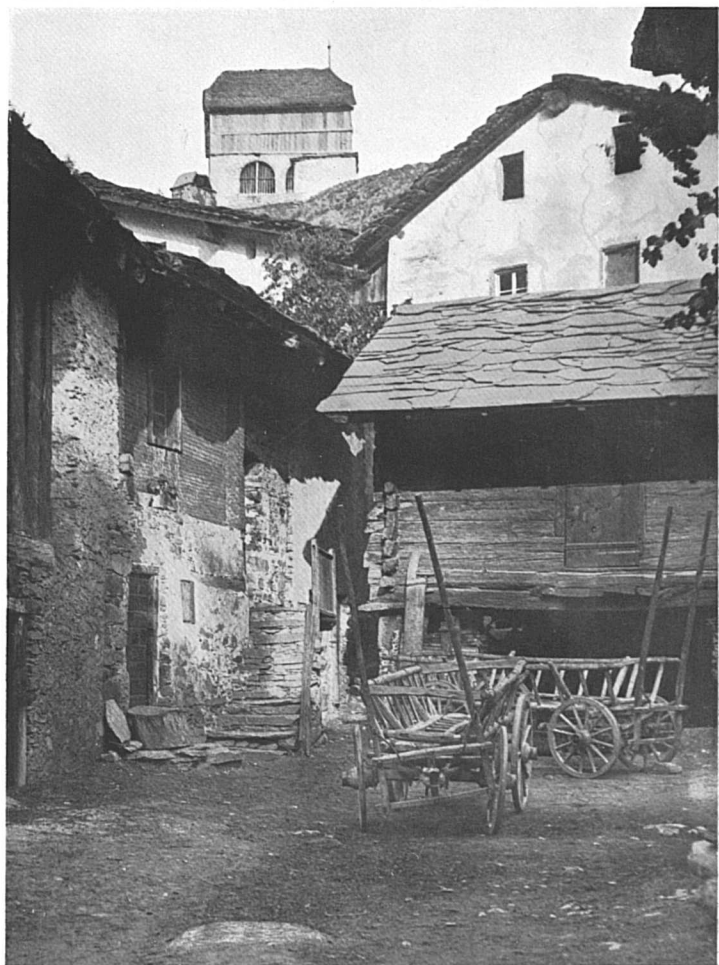
After spending a very pleasant time in this old-world village, we prepared to ascend the steep valley to where, almost at its head, the Schwarzhorn Hotel is situated, some five hours from Turtmann. Before leaving our "base of operations," we purchased a number of tin biscuit boxes (12 in. cube) in which to pack our plants for transmission to England, and tying these up into big parcels, posted them, as may be so easily done in Switzerland, to the hotel. This was a great convenience, as the stock of such things is apt to be limited at such an out-of-the-way place as Gruben-Meiden, to which everything has to be taken by the daily mule train, that laboriously crawls up the steep valley.

Having satisfactorily settled this piece of business, our host kindly accompanied us for the first mile, where the track wound through the village, and over



A STREET IN TURTMANN VILLAGE.

(See page 159.)



A BYWAY, TURTMANN.

(See page 159.)



a steep shoulder, until reaching an outstanding spur, we bade him good-bye, and started in earnest on the long, hot tramp we had undertaken. From this high vantage point, before plunging into the narrow and tortuous gorge, from which little can be seen, it was pleasant to look round and across the great valley of the Rhône, to the high mountain barrier opposite us, behind which towered the snowy summits of the Bernese Oberland. On our left the river hurried towards the lake of Geneva, flashing like a silver riband along the valley till it was lost to view on our right, as the mountains about Brieg and the Simplon closed in the scene on that side, whilst at our feet lay quiet, sleepy little Turtmann, happy and contented, even though two hundred years behind the times.

Turning about, and bracing ourselves for the long trudge up the valley, we started off, keeping first to the right bank of the stream, and then crossing to the left. For a considerable distance the track passed through thin pine woods, which offered nothing very remarkable in the way of plants. In places, far down the precipitous bank, a red flare would denote *Dianthus Carthusianorum*, a pink with great intensity of colour, in habit somewhat reminding one of a Sweet-William, though more wiry. It appears to favour open, sunbaked, stony ground, where it roots to an immense depth, rendering its removal in good condition impossible.

When openings through the trees permitted it, we obtained pretty glimpses of the opposite side of the

valley, often dotted with quaint châteaux, and around them wandered the cattle, whose bells of various sizes constantly jingling, made music on the hot, still air.

Where meadow-like patches of rich luscious turf ran down to the mountain stream, we could see that the ground was decked with myriads of sub-alpine plants, such as Campanulas, various *Phyteumas*, *Veratrum*, and *Chrysanthemum Leucanthemum*, making the whole, when viewed from a distance, appear like a tapestry worked in many colours. At the edge of the track, in the half shade of the pine trees—*Sax. cuneifolia* made vast green carpets, its tiny flower buds just protruding from the centre of its rosettes; while in less shady places, *Sax. aizoon* mantled the rocks in silvery colonies, creeping over the grey support, or huddled into crevices, sending upwards and outwards their myriad spikes of flowers.

As we tediously climbed the stony path way up the valley, magnificent scenery was disclosed to us, especially as the further we went the thinner became the woods. Looking down the valley to the north, the rich green foliage of the pine trees, with here and there the ruddy bronze of their stems, clothed the steep face of the mountain sides on either hand, whilst the roaring glacier stream gleamed and flashed, as it tumbled down its boulder-strewn bed. Far beyond this darker foreground, and softened by the bluish distance, the glittering peaks of the Oberland rose in ridge after ridge till they met the sky above.

Realizing that we should soon be beyond the shade of the friendly trees, and exposed to the full glare of the noon-tide sun, we decided to halt for lunch ; so, selecting a soft bed of pine needles, we made ourselves comfortable among the far-spreading roots of a giant conifer, where they wandered over the surface of the rocky ground. These upstanding ridges made most convenient resting places, and we were soon unpacking our provisions, and filling our drinking cups with deliciously cool water from a neighbouring rill. At Turtmann we had been persuaded to take some sandwiches, made of a specially prepared ham. We were told that it had been cured by hanging for some four years, at a great elevation, thereby slowly drying up and leaving in a small compass all the food properties which were previously distributed throughout its greater bulk ! We attacked this dainty with great gusto, since the walk had rendered our appetities keen, but I cannot say that it appealed to us as much as I had expected. There was certainly just a trace of ham flavouring about it, but the united opinion of my companion and myself was, that it ought to prove an extremely durable material if used in place of sole leather. Certainly the endeavour to masticate the first few samples proved so arduous that we were obliged to prolong our few minutes rest into a good hour, before we felt qualified to resume our journey ! While we were thus employed, the daily post mule and its driver overtook us, the former loaded up to an alarming degree

with the tin boxes we had despatched from Turtmann. The attendant was assisting the mule up the steep path by holding on to its tail, so that in addition to its packages, it had to bear at least half the weight of the man. It appeared very happy, however, and kept, as is usual with mules on mountain tracks, to the extreme outside edge of the path, suggesting that the slightest slip would precipitate it down the steep hill-side. It is said that this habit of walking close to the outside edge has been engendered by a loaded mule coming constantly into contact with the rock, bounding the inner side of the track, where the path is a mere groove on the side of a declivity, as it so frequently is ; whereas by keeping well away from it, the projecting load on the mule's back (which, as the animal walks over the rocks, lurches from side to side even when well secured), is kept clear of the obstructions. It appears to be well recognised that to urge these animals on, the best method is to pull their tail, an arrangement which obviously serves a double purpose.

As we neared Gröben Meiden, the alpsides were spangled with the shaggy fruits of *An. sulphurea* and *Geum montanum*, whilst on moist and slightly shaded banks were sheets of *Viola biflora*, whose cheerful little yellow twin-faces seemed to wink at us from a dense cluster of roundish leaves. Although this *Viola* is so wonderfully free in the mountains, I have not found it a very satisfactory plant in my garden, for it usually dies out after a year or two. This may be due, how-





THE TWO-FLOWERED VIOLA (*V. BIFLORA*).

ever, to purely local conditions, since it proves, I believe, almost a weed in one other Essex garden. The illustration opposite will suggest how prettily it grew in the Turtmann valley.

Not far from the viola we came upon a rocky bank, through which water was oozing in considerable volume, inducing a delightfully fluffy species of moss to grow in quantities upon it. Seated in countless thousands upon this ground-work were the pale green rosettes of sticky leaves of the Common Butterwort, *Pinguicula vulgaris*, and held aloft upon dainty stalks were the solitary, purple-coloured flowers, shaped somewhat like a violet.

A few yards farther on, a rill of snow-water gambolled down the alpside, and noticing a haze of white some way from the path, we clambered up to investigate. It proved to be large tussocks of *Sax. rivularis*, whose many branched flower stems displayed countless white starry flowers, of comparatively large size, and carpeting the sodden earth in which these plants were growing was the close coral-like growth of the Alpine Club-moss, *Lycopodium alpinum*.

On sun-baked boulders, where the merest roughening gave them a foothold, grew lovely clusters of the Cobweb House-leek, *Semp. arachnoideum*, in every variety of size, from the normal three-quarters of an inch across, to the very smallest—multitudes of apparently mature plants measuring only three-sixteenths of an inch in diameter—while they ranged

in tone from green to richest claret colour, contrasting delightfully with the silvery whiteness of the downy cobweb-like deposit on their centres.

Everywhere on the alpside the erect growths of *Veratrum album* stood up boldly above the turf, whilst in moist boggy ground clumps of *Geum rivale* nodded their ruddy heads of flowers. Particularly dainty were these drooping heads of blossom, depending from the almost chocolate-coloured stalks; they contrasted vividly with the white star-like display made by *Ran. aconitifolius*.

We were beginning by this time to wonder whether the hotel was ever coming into sight, and discussed the possibility of our having mistaken our track after all, when, upon rounding one of the never ending succession of shoulders, a white spot in the distance put fresh energy into us, and though there was still two miles to be covered, and we were terribly hot and tired, we recrossed the stream by means of a tumble-down plank bridge, which appeared likely to collapse at any moment, and made our way up to our haven of refuge.

As we approached, the higher alpine meadows became even more densely clothed with mountain flowers, whole stretches being pink with the tiny umbels of the Bird's-eye Primrose, and where these thinned off, the story was taken up by vast drifts of *Viola calcarata*, *Soldanella alpina*, and clumps and starry clusters of *Gentian bavarica*, in all their rich purity of colouring.



When we at last climbed up the steps leading to the entrance of the hotel, we were so thoroughly tired out that we decided to indulge in a well earned rest before making a survey of the immediate vicinity. We were greatly relieved, when shown to our room, to find our baggage, which we had despatched from Geneva, neatly stacked in one corner, and it did not appear to have been handled more roughly than usual, a matter of no little importance, as all my photographic plates were packed therein, and had the post mule been unusually frisky while transporting those bags up the valley, many of the illustrations in this book would probably never have seen the light of day.

Later in the afternoon, when a substantial meal (in which mountain-cured ham was not included) had rendered us most kindly disposed to the world in general, we sauntered about our temporary home, and made ourselves acquainted with the "lay of the land." The Hotel Schwarzhorn is situated in a most delightful spot, and is a roomy, comfortable building, capable of accommodating some sixty or seventy visitors (though I doubt if it is often called upon to that extent). It is built on a knoll, some sixty or seventy yards from the swift-flowing Turtmannbach, at the base of the steep mountain side, leading to the first and second Grügen Alps, and thence to the Augstbord Pass. On the opposite side of the stream rises the equally steep mountain barrier, clothed on its lower slopes with larches and stone pines. Above are situated

the first and second Meiden Alps, leading up to the gaunt and naked Meidenhorn (9,780 feet), on past one or two small lakes, to the notched ridge between the teeth of which is the Meiden Pass, the direct route to St. Luc, and from the top of which (9,920 feet) a magnificent view of the Bella Tolla on the one side, and the Weisshorn on the other, is obtainable. To the south the valley ends in the majestic Turtmann (or Barr) glacier, embedded between the Diablons (11,850 feet), Weisshorn (14,803 feet), Brunegghorn (12,623 feet), and the Barrhorn (11,920 feet), one vast snow-clad rampart, dazzling in its glittering whiteness as the afternoon sun struck upon it. To the north, a turn in the steep Turtmann valley, up which we had just toiled, closed in the view, and we saw over the pine-mantled hill-sides, and far, far away in the blue distance, the softly rose-tinted heights of the Bernese Oberland.

Beyond the subdued roar of the glacier stream, not a sound broke the stillness as we stood entranced by the beauties of this secluded spot, for it was too early for the cattle to be up there—the lush-grass, which was springing up so thickly all over the alpside, having only recently been freed from its snow-mantle.

In addition to the hotel, there were only a few ancient dark-coloured châteaux, mostly used as shelters for the cattle, and a rather better built one, which served as a post office, the post mule arriving once a day.

Amongst the grass about the hotel *Geum montanum*

was abundant, and must have made a pretty sight when in flower, though at the time of our arrival it had just passed to seed. Where a few boulders had fallen so as to form a little protection, the freshly tinted green fronds of the oak-fern filled the interstices, while *Semp. montanum*, *S. tectorum*, and *S. arachnoideum* mantled all the rocks in the full sunlight.

Having attended to the correspondence which was waiting for us, and anticipating a busy day on the morrow, we "turned in" early (indeed, at this altitude everyone seemed to retire at 9 or 9.30 p.m. at latest), and slept soundly in the cool mountain air, lulled to slumber by the music of a mountain stream.

## CHAPTER XIV

### TRAMP TO THE HEAD OF TURTMANN VALLEY

It was our intention to utilise the Schwarzhorn Hotel, situated in the heart of the Alpine zone, as our headquarters for awhile, and to make excursions therefrom in different directions. My subsequent references to "the hotel" must, therefore, be understood to mean these headquarters. Gröben Meiden embraces an area of considerable extent, the metropolis of which is the hotel, the tiny church, and the dozen or so decrepid chalets and cow-houses which adjoin it.

We decided first of all to make a preliminary tramp further up the valley towards the Turtmann glacier, said to be only two hours distant, judging that we should thereby secure a better idea of our surroundings, at the same time obtaining some indication of the general flora we should be likely to encounter thereabouts.

Accordingly, we started at 8 a.m. in glorious sunshine, first crossing the rough plank bridge which spans the stream. Bearing sharply to our left, past the dilapidated ruins of an earlier hotel, we turned along the left bank of the stream, and traversed the low-lying strip of meadow land which there runs for some

distance. All over this luscious turf, and gently swaying in the breeze, were the shaggy seed-pods of the beautiful Sulphur Anemone. The morning sunlight glinting on the glossy fibres attached to each seed, produced a very pretty effect. From time to time, where the grass was shortest, the pure white, primula-like flowers of *Androsace obtusifolia*, growing in small colonies, would catch our eye, looking extremely dainty, so as the lighting was suitable, and the blossoms still, I put up my camera and made an exposure on them, resulting in the illustration which appears on page 172.

All along this high meadow path, growing as freely as dandelions on an English roadside, were lovely tufts of *Gentiana bavarica*, the azure flowers produced in such abundance as to entirely obliterate the tuft of close, somewhat box-like foliage which produced them. On a moist slope, where the ground was covered with a film of dainty fern-like moss, we came upon a wonderful display of Butterworts, much larger than those we had previously seen, and known as *Pinguicula leptoceras*, said to be a variety of *P. grandiflora*. They grew in such quantities that by working our collecting knives under the moss, we readily removed slabs as large as one's hand, containing twenty or thirty plants of the *Pinguiculas*. My experience of these interesting insectivorous plants is (here in Essex) rather disappointing. I have provided special places for them in my garden, where a gritty, peaty compost is fre-

quently moistened with fresh water, and here they sometimes grow fairly well, and even flower. When autumn approaches, and the light green leaves die away, they produce plump, resting buds, down in their heart, not infrequently accompanied by numerous tiny bulbils. This, alas, is generally the end of their promising career. Either browsing slugs look upon these dormant buds as reserve rations during "hard times," or else inquisitive birds pick them out, possibly when the frost has lifted them, as it sometimes does, almost clear of the soil. Whatever may be the cause, it is rare for me to have anything like a display of them the second year.

Knowing that we should re-pass this spot on our return, we selected a depression in the ground a little way from the track, and deposited therein our recent acquisitions, carefully screening them from view by cutting rhododendron branches and sticking them in the soil to roughly imitate one of the many straggling bushes of the Alpenrose, which there grew in such abundance.

Carefully noting the whereabouts of our treasures, we resumed our walk, shortly coming upon a rich, flat pasture of considerable extent, which appeared to be entirely occupied by Primulas and Gentians. For a space of eighty square yards we could see nothing but the soft pink umbels of the Bird's-eye Primrose, interspersed with the azure tufts of *Gentiana bavarica*. The Primulas varied considerably, both in shape and colour,



A WHITE ROCK ANDROSACE (*A. OBTUSIFOLIA*).  
(See page 171.)



THE BIRDSEYE PRIMROSE (*PRIMULA FARINOSA*).



some being pale lavender, others rich rose—while some were starry, and again others well rounded, so that there was little or no space between the petals. The ground was extremely wet and spongy, made up of grassy hummocks rising from miniature pools, and being composed, so far as we could see, of a thick layer of rich vegetable humus, probably brought down from the adjoining alpside.

To a very large extent the *Primulas* favoured the more or less vertical sides of these hummocks, which were in no case more than six or seven inches high, while the *Gentians* occupied the surface of the knolls. The illustration opposite gives some idea of a colony of these miniature primroses, though it lacks the delicate colouring of the original.

Of the many varieties of daintily-hued butterflies which are common in Switzerland, few are more attractive than the small "blues," which flutter gaily in numerous companies all over these flower-decked alps. While searching over this spongy place, I came upon a tuft of gentian, upon which reposed one of these pretty little "blues." Arranging my camera with the utmost caution, so as not to disturb its slumbers, I secured the photograph illustrated on page 128, which not only depicts the gentian tuft, with its dainty visitor, but also shows that there is still some virtue in the old adage, that "the early bird catches the worm."

All the best forms of these two plants (or as many as

we thought it convenient to take) we added to our "bag," and then turned our attention to the adjacent stream-side, where the river moraine was rather extensive as it swept round a protruding spur. Upon this stretch of water-worn rubble *Noccoea brevecaulis* abounded, its shining leaves and diminutive clusters of white flowers looking particularly attractive, backed by the grey and black stones of the moraine. Here, too, beautiful tufts of the Yellow Mountain Saxifrage were just opening their bronzy flowers, growing where much of their foliage and all the roots were bathed in the swiftly-flowing glacier stream. It is rare in English gardens to see this *Sax. aizoides* growing luxuriously, though a considerable amount of success attends planting it in a mixture of grit and vegetable soil, through which fresh water is frequently passing. The still more beautiful form of this plant, known as *Sax. aizoides*, v. *atrorubens*, thrives wonderfully with me in my moraine, and when its glorious flowers spangle the rich green hummock of foliage, it is a most striking plant.

The typical form of this Saxifrage, though so attractive to look upon, is by no means an easy plant to photograph, owing to the non-actinic quality of its deep green leaves and bronzy yellow flowers. However, by using my twelve-times light filter, necessitating a prolonged exposure, the result, as shown on page 176, is by no means unsatisfactory. The chief difficulty I encountered was to find a suitable perch upon which to stand whilst

focussing, since all the plants which were most freely flowered, faced *towards* the water. Not wishing to get into the stream which, though only ankle deep, was icy cold, my companion helped me to get together a number of large stones of sufficient thickness to rise above the surface, when placed in the water, and upon these I stood while making the photograph. Although the plant is only a few inches high, there was, even on that quiet day, sufficient breeze to cause the growths to tremor, during an exposure of some forty seconds, and I had to rig up the wind-screen to prevent movement spoiling the result. When about to step off my temporary platform, encumbered as I was with the camera, one of the stones (which apparently had not been reposing on its broadest base), overturned, precipitating me into the water. We had taken so much trouble to prevent a slip that I have my own opinion as to whether it was quite the unavoidable accident which it appeared, but since it is quite possible that my companion may read this narrative, perhaps it would be well to forego entering into further details!

Getting rid of as much moisture as possible from my lower extremities, we proceeded to hunt over the moraine for more treasures, coming quickly upon large patches of the Alpine Toadflax. In addition to the usual form, which bears bluish-violet flowers, with two bosses of intense orange on the centre of the lower lip of each spurred, snapdragon-like blossom, we found

many plants with wholly self-coloured flowers, and while no more beautiful than the type, they were very distinct and of large size.

We had been so engrossed in these treasures all about us, that we had, to a large extent, ignored the glorious view which had opened up as we had been proceeding.

Pausing now, we allowed our gaze to travel from the collected plants lying at our feet, over to the further side of the spongy patch, where *Ran. Gouani* (a brilliant yellow buttercup) and the Globe flowers (*Trollius europeus*) made a golden stretch a hundred yards in length, curving round to the left to join the river, near to a group of ancient châteaux, standing under the lee of a wooded spur coming down from the mountain side.

On past these châteaux, the narrowing valley, with its rich green, pine-clad sides, focussed our attention upon the mighty Turtmann glacier, which rose in several vast ice-falls, till it reached the sky-line—and then, on either side, the massive Weisshorn and the Diablons, partially hiding their beauty behind snowy wisps of vapour, completed a picture, beautiful enough to make even a plant collector rest awhile.

What photographer could resist such a lovely composition? Hastily unhitching my rucksack, I rigged up my camera, and made one or two exposures, again using the deep yellow light-filter, so as to secure the brilliant yellow foreground composed of buttercups and globe flowers, in something like their visual



THE YELLOW MOUNTAIN SAXIFRAGE (*SAXIFRAGA AIZOIDES*).  
(See page 174.)



THE UPPER LIMIT OF THE TURTMANN VALLEY. TROLLIUS IN FOREGROUND.

intensity. Perhaps the reproduction opposite may suggest in a modest way the beauty of the scene. This picture also illustrates the open character of the ground we were now approaching, the rock-strewn slope seen in the middle distance being jewelled with the multi-coloured flowers of the dwarf-growing alpine plants, which there abounded in such amazing profusion, while bordering the fringe of rapidly thinning pine trees, the sprawling growths of the Alpenrose were thickly studded with their pink blossoms.

Resuming our walk, though now rising more and more from the level of the stream, we soon reached some curious rocks—apparently huge pieces which at some time had come hurtling down the mountain-side and lodged in their present position. These giant “pebbles,” whose sharper edges had become somewhat rounded by the weathering of many years, stood some fifteen feet in height, and were literally encrusted with *Sempervivums*. The great majority of these were *S. arachnoideum*; there were, however, numerous examples of both *S. tectorum* and *S. montanum*. The downy wads of the Cob-web houseleek, burnt to a rich crimson colour by the torrid sunshine in some places, were most attractive, and made a pleasing photograph. (See page 178.)

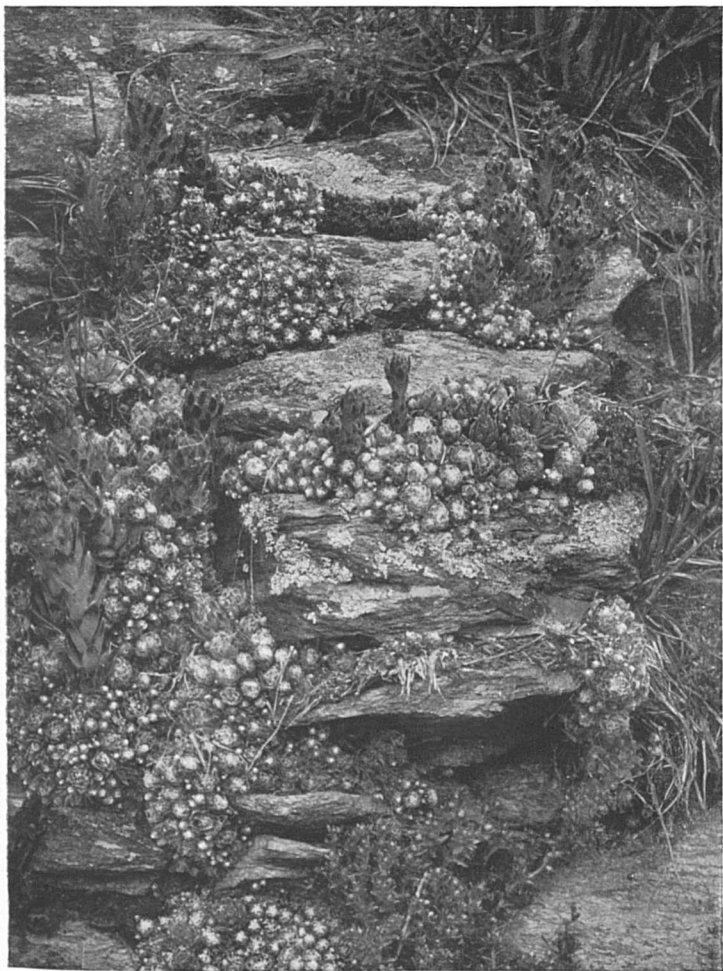
Just above this point we had to cross a belt of rhododendron “scrub,” which we had looked up at from the stream side, and found it extremely hard and tough to negotiate, besides concealing the nature of

the uneven ground upon which it grew. Resting here for a few moments, we were able to look down upon the path we had been traversing, as it meandered more or less parallel to the winding stream, and noted in particular the rich patches of red and yellow which proclaimed the presence of that curious parasite, *Pedicularis*, a plant which draws its nourishment from the grass roots, instead of fending for itself in the orthodox manner.

The view from this point, back towards Gröben Meiden, was indeed lovely. In the immediate foreground were the last of the now rapidly-thinning pine-trees—grotesque, wind-riven specimens, often a few feet only in height, or where they had had the temerity to grow like their relatives, who enjoyed less exalted positions, they were rent and blasted by the force of the wintry gales, or broken down by the weight of snow. To our right and on the opposite side of the Turtmannbach, the steeply rising, wooded heights leading to the Giggiealp rose in a series of pine-clad shoulders, till they merged into the distant Gröbenalp, while some three or four miles away to the south, the sunlight glinted on the whitened walls of the Schwarzhorn Hotel.

Owing to the sinuous course of the valley, the inter-lapping hills prevented any extended view along its base, but away there in the beautiful blue distance, the glorious snow-clad range of the Bernese Oberland melted into the sky above. Despite the range of tone





THE COB-WEB HOUSELEEK (*SEMPERVIVUM ARACHNOIDEUM*).  
(See page 177.)



LOOKING DOWN UPON GRUBEN MEIDEN FROM THE GLACIER.

The snow-capped heights of the Bernese Oberland in the distance.

included in such a picture, extending from the rich bronzy green of the pine trees in the near foreground, through the more mellow tones of the alpsides in the middle distance, to the exquisitely delicate gradations present in the Bernese summits, the "Royal Standard" ortho. plates, aided by my medium filter, proved fully equal to the occasion. How absorbingly beautiful such a prospect is must be seen to be fully realized; phrases, no matter how carefully chosen, fail to give more than a mere suggestion of the real glory of the scene. And how rapidly the time glides away, while one is so occupied? I was surprised, upon looking at my watch, to note how far the morning had advanced. Remembering that our intention was to get a general idea of this part of the valley, we forced ourselves to turn from the pleasant occupation of admiring everything in general, to the more immediate (if exhausting) process of scrambling up the now rocky hill-side. On this moist and steeply sloping ground large stretches of turf were tinted purple with the upright, spear-like flower stalks of *Orchis purpurea*. Though this is, I believe, a rather difficult plant to establish in the lowland garden, it is an extremely beautiful one when seen in wide stretches in its native habitat. It appeared to prefer stony ground with loam and leafsoil running through it, watered during its growing season by copious supplies of percolating moisture. In such situations the erect flower spikes frequently attain a height of twelve or eighteen inches, each bearing a large

number of richly coloured blossoms. As with other hardy orchids, no doubt much of their uncertainty in cultivation is due to the difficulty of locating them at other than their flowering time, when the new tuber, which is to produce the following year's flower, is in the process of formation. This naturally leads to their being removed at a time most likely to harm them, and when one remembers the extremely brittle character of their fleshy roots, coupled with the amazingly stony nature of the ground in which they usually grow, it is not surprising that they should be frequently damaged in collecting.

Growing in close proximity to the orchid, though in rather dryer situations, we found quantities of that queer little fern *Botrychium Lunaria*, or Moonwort. Rarely rising more than four to five inches from the ground, it appears to produce only two fronds, one of which is wholly vegetative, while the other, and smaller one, grows erect and bears the spores, much after the manner of the Royal fern (*Osmunda Regalis*). While it is usually impatient of removal, and difficult to cultivate, we took up a few plants in the hope that they might survive. I fear, however, that they have already "joined the majority." On the upper face of some fair-sized boulders, cropping out from the alpside, one of the "mossy" varieties of saxifrage (*Sax. muscoides*) made a green mantle, and was covered with its whitish flowers; while near by, and in a similar situation, the Cob-web houseleek thrived in hummocks.





TRIFOLIUM ALPINUM.

It appeared to me curious that these two plants, to which, in our garden, we allot such different positions (*viz.*, shade and moisture for the saxifrage, sharp drainage and full sunshine for the houseleek), should be such near neighbours.

Now that we had risen clear of the pine trees, and the alpsides were fully exposed to every ray of the sun from early morning till it dropped below the western hill, the ground was jewelled with the brilliantly white, daisy-like flowers of *Chrysanthemum alpinum*, interspersed with rosy clusters of the alpine clover.

While many of the mountain plants have developed deep rooting tendencies, few have done so to a greater extent than *Trifolium alpinum*, whose long white "whip lash" of a tap root, seems to go down and down for ever, whereas if this long and almost fibreless root is broken, it does not seem a very kindly plant to transfer to our gardens. However, by undermining the tuft and prizing out the rocks, so firmly embedded in the soil of the alps, one can often manage to extract a great deal of root, and occasionally a plant will be found having a few small surface fibres. By placing these plants, upon arrival home, into cocoa-nut fibre mixed with sand, they not infrequently throw out fresh roots and will then become quite reconciled to their change of environment, provided we give them deep and extremely gritty soil, into which they can roam.

But to resume—the flowers of this clover are vastly more elegant than those borne by the lowland members

of the same family, and are composed of from six to twelve rich, rosy-coloured, pea-shaped flowers, produced in clusters, some two inches above the ground, which is clothed with the delicate fresh green of its three-lobed leaves. Whereas the majority of mountain plants occasionally produce white varieties, I had hitherto not met anyone who had grown (or even seen) a white *T. alpinum*. I was, therefore, particularly keen about getting one if only we could come across it. Most diligently did I search that spot, in the hope of finding the *albino* form, thinking that among the hundreds of tufts which mantled the alpside, some at least would show a tendency towards a lighter colour, if not indeed quite white. However, after hunting about for a considerable time, and finding that the blossoms appeared to be absolutely uniform in colour, we contented ourselves with making a negative of them, and the illustration on page 181 fairly represents some of the clusters, indicating the striking contrast between the rich rosy flowers and the soft, glaucous foliage.

Remembering how rapidly the time was flitting away, we packed up the "kit," and were preparing to move on, when a tuft of white attracted my attention, a few yards away. As I had already been close to that place, I concluded it must be merely another of the myriad groups of the Alpine Chrysanthemum, which here grew in such quantities, throwing up their pure white blossoms from a dwarf growth of much divided, marguerite-like foliage. Thinking it





CHRYSANTHEMUM ALPINUM.

(See page 181.)



YELLOW STAR OF BETHLEHEM (*GAGEA LUTEA*).

might perhaps be just worth while to make sure, since we were so near, I strolled over to the tuft, and there, right before me, lay the very plant I had so desired to collect. The colour of the flowers had departed from that of their relatives in one bound, and exhibited a purity of tone to which even the most fastidious could take no exception. It is not necessary to dwell upon the careful and energetic way I set to work to remove it, with every thread of root which I could get. Although this was the only *albino* form of the plant I was able to find during my whole trip, I was lucky enough to extract it so satisfactorily that it is now growing very happily indeed in my garden, planted firmly in the moraine, into which I hope it will root as freely as it did into the rocky alpside of its native valley.

After thoroughly exploring the district, and noting with delight the richness of its flora, we gradually returned by a circuitous route to the stream side, passing in one moist level spot a beautiful display of *Gagea lutea*. This bulbous plant somewhat resembles a yellow *Ornithogalum*, its branched stems bearing several six-petalled flowers, which, amid the narrow leaves, carpeted the ground for a considerable distance. Thinking this would make an attractive picture, provided I could secure the yellow colouring in something like its apparent brightness, I made an exposure, and the reproduction opposite gives a very fair idea of the plant. Wending our way along the valley bottom, we reclaimed our buried treasures from beneath the

screen of Rhododendron bushes, and placing them in our collecting sacks, trudged along to where a timber bridge spanned the noisy stream. This bridge had been ingeniously contrived ; a large tree, which had originally grown on the further bank, had been felled in such a way as to cause it to fall at right angles across the water, and to this foundation had been added a rough handrail and a few planks. The bridge sloped up to where the fallen stem, cracking partly through as it fell, still remained attached to the parent stump, and to make good the inequality in the level, a mound of earth has been formed leading down to the bank on the opposite side. The meadows through which we walked towards the hotel were equally gay with flowers, as those we had already seen, *Primula farinosa* especially making lovely drifts of pink at the edge of the Turtmannbach.

Upon reaching our headquarters, we set to work and sorted out our plants, carefully packing them into our tin biscuit boxes, so that they would not shake about, and in the course of the afternoon delivered them into the hands of the postmistress, to be sent by mule to Turtmann village, whence the rail would convey them to our respective homes in England.

Idling away the evening on the pleasant slopes near the hotel, we unanimously decided that we had found a delightfully sequestered spot, the floral treasures of which would occupy us for many days, both photographing and collecting.

## CHAPTER XV

### GRUBENALP

DURING a chat with our host one evening, we learnt that high up above the second Grubenalp, and within half an hour of the Augstbord Pass, certain minute plants grew upon the rocks, and produced quantities of bright blue flowers. This certainly sounded like that choice and almost microscopic alpine Forget-me-not, one of, if not *the* greatest treasure to be found in the higher Alps, botanically known as *Eritrichium nanum*. Growing only at elevations ranging from 8,500 to 9,500 feet above sea level, on the granitic (or non-limy) formations, it is one of the most exquisitely beautiful of all the mountain plants, and certainly one of the most difficult to keep alive in our English gardens.

Knowing that we were near to one of the stations for the *Eritrichium*, we decided to make the ascent of the Grubenalp on the morrow, in the hope that the position indicated by our host would prove correct. Although the plant grows freely in certain localities, these places are restricted, and often widely separated from one another; it therefore follows that unless one is fortunate enough to chance upon the exact

spot, one may easily wander about for hours and not so much as catch sight of a single plant.

Learning that the higher part of the mountain was still snow-covered, we arranged, so as to avoid delay, to take one of the hotel porters with us to act as guide and help with our kit. Anticipating that we should have a long tramp, we gave instructions to be called at 5 a.m., should the weather be fine, and then "turned in," enjoying an unbroken sleep, until a hammering on our door announced the fact that it was time to get up.

The weather favoured us, and as we drank in the delicious freshness of the early morning air, which, though little above freezing point, was intensely invigorating, it made us feel equal to any amount of exertion which our proposed expedition might require. Within a few minutes we were downstairs, to find breakfast awaiting us, to which we did full justice. While this important matter was receiving our attention, our lunch was being prepared, since by this arrangement we could be away from "home" all day.

These provisions add a little weight to the rucksack, but it is well worth the extra trouble, since it is by no means easy, when in the mountains, to get back by any given time. Often one is delayed by bad weather, and in particular by mists, which, descending suddenly, render the progress over unknown and irregular ground far from rapid.

By 6 a.m. we were well away from the hotel, rising over the open alp, gay with the seed vessels of the

mountain geum, and the yellow flowers of *Euphorbia carniolica*, till we reached the rough plank bridge over the foaming torrent, which comes leaping madly down from the second Grubenalp, soon to lose itself in the swiftly flowing Turtmannbach below.

It may here be of interest to roughly describe the "lay of the land," and to indicate the position occupied by the Augstbord Pass. Parallel with the Turtmann valley, and divided from it by a vast mountain ridge, terminating to the south in the snow-capped Weisshorn, is the Zermatt valley. Both these steep-sided valleys open at their northern extremity into the great valley of the Rhône, and whilst one (the Turtmann valley) is so little known, the other (the Zermatt valley) is probably one of the most far-famed holiday resorts in Switzerland. To reach this eastern valley from Gruben Meiden, it is necessary to cross either the Augstbord or the Jung Pass. The former of these two is the most generally favoured, though both are comparatively little frequented. The pass itself, 9,515 feet above sea level, is situated between the dark, and scowling Schwarzhorn (10,523 feet) on the north, and the Steinthalhorn (10,300 feet) on the south, and commands a magnificent view across the Zermatt valley, to the Fletschorn and Simplon group, while to the west the whole range above the Turtmann valley is seen, including the Meiden Pass on the distant Bella Tolla. Though our headquarters were named after it, nothing of the Schwarzhorn can be seen from

the hotel, owing to the immensely steep side of the valley, and it was this Grubenalp which we had first of all to ascend.

Soon our track became a zig-zag through a thin pine wood, where the lovely blue mountain pansies ran riot among the scrubby bushes of the box-leaved Milk-wort, *Polygala Chamaebuxus*, whose shining ever-green foliage and purplish stems contrasted pleasingly with the cream and yellow-coloured pea-like flowers. Getting free of this wood in a short time, the path continued to ascend, still very steeply, across the open alpside, to the first châteaux, which later in the season are used by the cows which are driven up for pasturage. From this point a charming view is obtained, both up and down the valley ; the white spot below is really the hotel which we so recently left, looking like a mushroom among the green meadows, and that silvery streak winding along beside it is the roaring glacier stream which we wandered by only yesterday. Away there to the north the snow-covered summits of the Bernese Oberland rise up beyond the further rampart of the Rhône valley.

As we watched, an interesting phenomenon was taking place. Up the broad valley of the Rhône rolled and swathed vast quantities of vapour, which in the morning light looked like a sea of cotton wool, billowing up and down the mountain sides, completely obliterating the lower slopes of the mountains rising from the Rhône, and yet leaving all above its turbid





PRIMULA HIRSUTA.



surface as clear as crystal. Soon this white vapour began to creep up the narrow Turtmann valley, first in a smoke-like wisp, then in greater volume, until, as we watched, the more distant pine trees gradually disappeared as the density of the vapour increased, and hitherto unnoticed shoulders of the mountain sides stood out in bold relief. Very fascinating it was, to watch this gradual envelopment of our valley, and to note the beautiful light and shade upon the rounded upper surface of the oncoming cloud.

Turning our backs reluctantly upon this beautiful sight, we continued the ascent, still zig-zagging over short turf, upon which the myriad pansies made a violet haze over vast stretches of the boulder-strewn alpside, and above them, gently swaying in the morning air, the open flowers of the Sulphur Anemone welcomed the brilliant day. Mantling the steepest sides of almost every hummock, or partially protruding boulder, the Cushion Pink, one mass of flower, made patches of colour from afar; so charmingly did this grow and envelop the rocks about it, that I found it difficult to refrain from making photographs of every succeeding specimen.

Just on the steep rise to the second Grubenalp the hillside was honeycombed with large "workings" or burrows of the marmot—a shy little creature of the rodent family, extremely fleet of foot, and carrying a beautifully soft coat. These marmots call to one another with a curiously plaintive whistling sound, and

may be heard quite frequently, though they are less often seen. At the approach of winter they scratch out fresh tunnels, usually starting from beneath some large piece of fallen rock ; and there, in a cosy bed of dry grass, they hibernate till the warm air of spring awakens them. The peasants maintain that the marmots do not utilize the old burrows again, but make new ones early in the summer, to which they retire with lightning-like speed upon the approach of danger. On this occasion we were fortunate as, coming suddenly over a shoulder, and looking down on to a somewhat basin-like depression, we saw five of these little creatures careering madly across the snow, which lay like a beautiful white mantle all over this hollow. The marmots had no doubt heard our approach, and were doing their utmost to reach their homes when we caught sight of them, their tiny feet (as we afterwards found) leaving deep impressions in the soft snow.

The whole of this slope or shoulder, which we now had to descend, was clothed along its entire length with dazzling stretches of the Pyrenean Buttercup (*Ranunculus pyrenaicus*), lying so thickly in the folds of the ground as to resemble snowdrifts. Few of the mountain buttercups can surpass in beauty this graceful plant, growing rarely more than six to eight inches high, and bearing gloriously white, cup-shaped flowers of an iridescent, satin-like texture, upon slender stalks. In the base of this lovely cup is a



A DWARF ALPINE SHRUB (*AZALEA PROCUMBENS*).  
(See page 194.)



A WHITE BUTTERCUP OF THE ALPS (*RANUNCULUS PYRENÆUS*).

golden eye, composed of a cluster of its numerous yellow stamens, forming a most delightful contrast, as the wide open flowers gaze up at the brilliant sunshine. On dull and rainy days these dainty blossoms remain closed, and slightly nodding on their stalks, efface the "snowy" appearance of the hillside till one hardly recognises the spot. It is said that this *Ranunculus* is by no means a difficult plant to grow in our lowland gardens, and I sincerely hope this is so, though the small colony which I planted in my garden near London some two years ago, in a sunny position and gritty soil, has gradually dwindled. Thinking that a larger number of vigorous plants, carefully collected might be more successful, I unearthed a dozen or two, and consigned them to the rucksack, and hope on a future occasion to be able to report their progress. Such a delightful subject for the camera could not be missed, so I unslung my kit and rigged up. Here again the rareness of a wholly quiet air in the mountains was experienced, the flowers which had appeared so still while viewing them now swayed to a considerable extent. It was necessary also, to prevent the golden stamens appearing black in the subsequent picture, to employ the colour screen, which of course prolonged the exposure, thus increasing the risk of failure due to movement. However, by the careful use of my wind-screen, ably seconded by my companion—who held out our waterproof to still further increase its surface, I secured the representation of these lovely

flowers on page 191. This, I think, clearly shows the dainty shape of the blossoms, and the delicate modelling of each petal.

Dipping down this shoulder to the snowfield previously mentioned, which, though appearing from above as a depression, was in reality still gently inclining towards the pass, we crossed the snow to where a little rill intersected it, and following this up, we soon reached the characteristic, dark-coloured, soddened turf, only just uncovered by the receding snow, whereon the Snow-bells, or Soldanellas, were just unfurling their dainty flowers. Here, too, looking extremely fairy-like against the dark and soaking background, the pale, slender cups of *Crocus vernus* spangled the ground in myriads. This mountain fairy is the embodiment of grace, as its frail-looking, delicately tinted buds pierce the brown soil, while when its white, or faintest lavender petals unfold, and display the rich golden stigma, one wonders why we do not see it more frequently in cultivation.

A little beyond this point, and still at the edge of the snow rill (at an altitude of about 8,200 feet), a patch of white came into view. Having an inkling of what it might be, we bounded along to investigate, and sure enough, growing between small pieces of stone—about one inch deep in ice-cold water, was the smooth, deeply cut, dark green foliage, surmounted by lovely white cups, ruddy on their outside, of the Glacial Buttercup (*Ranunculus glacialis*). Long had I desired to see this



inhabitant of the higher Alps in flower; on my previous visit (the season being a late one) no sign of it had emerged from its winter covering. Here it grew freely, dotted about along the rill side, its flowers, an inch or more in diameter, almost hiding the foliage. Needless to say the camera was again requisitioned, and a portrait made of it—not a difficult matter this time, since the stalks being short—the whole plant standing less than three inches high—there was little trouble from my old enemy—wind. Growing, as it did, in loose stony rubble and vegetable mud, it was extremely easy to collect, though the sodden tufts had to be well drained before being put into our rucksack, otherwise they would have soiled the other plants which it contained. Despite the freedom with which it grows in the mountains, this buttercup is rather a disappointing plant in our lowland gardens, rarely giving us more than a leaf or two, and only occasionally a small, poor coloured flower. Once or twice I have flowered it, planted in my moraine, near to the fresh water stream which keeps the shingles moist, but at its best it is difficult to recognize it as the same plant which so abundantly spangles, with its pure chalices, the higher alpine passes.

Having satisfied our desires, by examining and collecting tuft after tuft of this dainty plant, until we felt a suggestion that familiarity might breed contempt, even with such a plant, we bore to our right, and clambered over some rough, broken ground, mostly mantled

with dwarf willows, such as *Salix herbacea*, and *S. serpyllifolia*, with the ever present *Homogyne alpina* scrambling about among them. This rough ground formed a ridge, running up the high valley, which was closing in on each side, to a narrower neck, soon to terminate in the pass itself. The whole of the upper irregular surface of this higher bank was one carpet of that minute Azalea, *A. procumbens*. Growing more like a very dwarf heather, with its wirey little branches spreading over the ground in every direction, making it quite springy to walk on, this choice, prostrate and diminutive shrub, garnished every lichen-covered rock, and set close upon the tiny stems were wee pink flowers in such profusion that the whole ground for hundreds of yards was of a soft pink hue, while the tiny, smooth, somewhat box-like foliage, of a ruddy bronze in colour, formed a rich carpeting, upon which the pink mantle was supported. Particularly attractive, to my mind, were those outcropping stones of a soft grey colour, enriched with the golden and ruddy-hued lichens, which at this altitude grow so abundantly on the rocks—for here the Azalea (or to call it by its more correct title, *Loiseleuria decumbens*) would send up a fan-like spray of branches, bearing their dainty pink flowers, as though anxious to veil, not merely every particle of the ground, but the rocks also. The photograph on page 191 illustrates how closely the dwarf, woody branches hug the rocks. Like its near neighbour,

the Glacial Buttercup, this Azalea appears to dislike lower elevations, and is rarely seen in good condition in the garden. It is usually an extremely difficult plant to remove, sending down its roots to an immense distance. We were fortunate, however, just here, in coming on several places where the roots were almost all surface ones, permeating a layer of rich leafy humus—some three or four inches thick—which had accumulated over large, slab-like pieces of stone, just below the surface, not unlike the positions in which I subsequently collected the *Anemone vernalis*, on the Meidenalp and probably due to the same cause.

These cakes, containing the Azalea, were reverently transferred to our sacks, and eventually to our tin post boxes, reaching England in such good condition that they are now looking quite as though they mean to thrive, on the half shady side of my moraine. For while in the mountains this little plant grows where every particle of sunshine reaches it—I hear from other growers that it must have partial shade in this country.

Resuming our tramp over this "turf" of Azalea, we traversed the length of the ridge, which then merged into a much steeper track. The comparatively gentle incline which we had been enjoying for some time came to an abrupt end, the country becoming much more rugged, with rock-falls in many places. The track, such as it was, led up a steep hillside composed solely of broken rock, and zig-zagged about on this for a con-

siderable distance. While the lower portion of the rock waste was too coarse to permit anything to find a foothold, as we rose we noticed places where smaller stones had, to some extent, filled in the interstices, and here grit had collected. On such spots a few somewhat starved pieces of the Glacial Buttercup showed] themselves, and here and there the rosy flowers of the Rock Primula (*P. hirsuta*). Turning abruptly at one of the zig-zags, we came suddenly upon small tufts of close, light green foliage (packed tightly between pieces of stone), almost hidden with pink buds, some of which were open, and showed like diminutive primula flowers. This dainty little plant proved to be *Androsace glacialis*, one of the most lovely members of a charming family. The purity of its pink was especially pleasing, vastly different from the poor "washy" colour which it deigns to produce when by chance it does flower in England—a somewhat infrequent event, since it generally refuses to live at all away from its rocky mountain fastness.

As we continued to ascend, this lovely little plant became more frequent, though nowhere did we find it in large pieces, and always on sharply sloping ground of the stoniest character. In many cases it was so packed between layers of shale-like stone, as to be largely protected from overhead moisture. Rather to my surprise, the plant did not prove to be a deep rooting one and the gritty, sandy nature of the soil it grew in rendered collection easy. Unfortunately,



ANDROSACE GLACIALIS.



from a photographic point of view, we were just a little too early to see it in its full beauty, only a proportion of the immensely numerous flower buds being open on any of the pieces we found. I hunted most diligently over the shingle slopes to secure a good specimen, but without success. However, as I shall narrate later, we were more fortunate elsewhere.

We were by this time close upon 9,000 feet above sea level, and though the rising ground on the east (that is towards the pass) prevented any view in that direction, the whole range on the opposite side of the Turtmann valley now stood out magnificently, while immediately below us the high, gently rising plateau, through which meandered the little rill we had previously explored, lay spread out, terminating abruptly in the distance, where it plunged down the steep side of the Grubenalp, and thence below, some 2,000 feet, to the Turtmannbach.

We decided to "camp" on this delightful 'vantage point, where we could satisfy our hunger and at the same time enjoy the glorious panorama which lay spread out before us. Knowing that we were now close to the spot where the "minute plants with bright blue flowers" grew, we wished to fortify ourselves against possible disappointment, or, on the other hand, if our hopes were realized, to be in a condition to do justice to the occasion. It was indeed pleasant, lying about on the less rugged portion of the stony ground, with the hot sunshine pouring down upon us, making us

overlook the giant thickness of our sandwiches, which frequently threatened to dislocate our jaws, and the somewhat toast-like crispness they had taken on, owing, I suppose, to the insufficient wrapping. A trickle of snow-water near at hand, delicious in its icy coldness, quenched our thirst, while to complete our happiness, "Our Lady Nicotine" spread her soothing presence over us as we lazily smoked our pipes before resuming our tramp.

Surrounded as we were by gaunt, rock-strewn slopes, jewelled here and there with the clear pink tufts of the Androsace, we could not help meditating upon the enormous amount of disintegration which must be constantly going on to produce such vast accumulations of detritus. Those silent, yet ever acting forces, sun, rain and frost, which are always shattering the everlasting (?) mountains, appear so insignificant when considered from afar. Here, where we could overlook hundreds of acres of rocky desolation (the blocks often strewn about in the wildest confusion), it was easy to realize that it must be merely a matter of time for even the proudest of the snow mantled peaks to end ingloriously in a vast collection of weather riven fragments.

Like giants refreshed (though with palpitating hearts) we set out on the last half mile, to where we could see, now that we had at last topped the great rock slope, the short turf was studded with weathered stone lumps. We were now traversing a more level stretch, but one







LLOYDIA SEROTINA AND PRIMULA HIRSUTA ON THE GRUBENALP.

which dropped suddenly down on our right hand a thousand feet or more, as though at some remote time this portion had been gouged out by some titanic force. As year by year this exposed rock face weathered, enormous quantities of detritus fell from it, intermingled with huge lumps of rock. In course of time the previously abrupt face became buttressed with this rock fall, and where larger pieces formed a lodgement the smaller particles filled up behind them, thus forming steeply sloping screes of broken grit, often of considerable depth.

It was upon this station, we were told, that the little blue flowers grew, and it needs no words of mine to indicate the keenness with which we searched the shingle slope. For some time our watchfulness was unrewarded, nothing of much moment arresting our attention, except in one place a small colony of *Primula hirsuta* growing at the base of a large boulder whilst intermingled with its rosettes, and through the turf adjoining, the tiny buff-coloured, somewhat tulip-like flowers of *Lloydia serotina*, veined with dark brown, nodded daintily on their slender stems. (See page opposite.) Having photographed these flowers, leaving my companion to "bag" the tiny, crocus-like bulbs I had unearthed, I was proceeding along the precipitous edge of the escarpment, when I caught sight of a tuft of the most delightful blue imaginable. Shouting excitedly to my companion, and hastily unhitching my camera, I clambered over the edge. A series of jumping slides

brought me abreast of the little patch of colour I had seen from above ; digging my alpenstock into the detritus, I " pulled up," and there right before me was, not one, but hundreds upon hundreds of small silky tufts of *Eritrichium nanum*, all ablaze with their proportionately large, Forget-me-not-like flowers of the most dazzling azure. Never in my wildest dreams had I hoped to see this lovely little mountaineer in such profusion. On the face of the larger boulders, where the roots could penetrate some microscopic crevice, on the outcropping ledges of the rocky wall itself, and spangled all over the loose steeply sloping scree, were the tiny tufts, rarely exceeding four to five inches in diameter, of this alpine gem. We were like butterflies, sipping the beauty from each and every tuft, wandering first this way and then that, along the steep face of the precipice ; ever and anon getting wholly on to the scree, when with a rattle our feet would go slipping from under us, and only our trusty stocks, ever held in readiness, prevented a rapid and undesired descent. All under that cliff we hunted, down a hundred and fifty feet or more, and everywhere the same glowing spots of colour met our astonished gaze. I myself was chiefly engaged in finding a really large tuft to photograph, but though I searched long and thoroughly, the best I could discover was one six inches by three. It would appear as though it never grew into larger pieces, at this particular station at least, and this seems to substantiate

the theory put forward of recent years, that this excessively difficult plant in our gardens is little more than a biennial in its native haunts. In many places the rocks were draped with beautiful clusters of *Primula hirsuta*, radiant with their rosy flowers, alternating with lovely clinging hummocks of *Silene acaulis*, but I fear we had no eyes for their beauties, when the glorious *Eritrichium* were so abundant.

Having recovered, to some extent at least, from the first surprise and wonderment, we set to work to photograph—a by no means easy matter on a loose scree slope, standing (or was it slipping?) at an angle of 50 degrees—when one leg of the tripod would be extended twelve inches, and the other two 4 feet 6 inches, where one had to balance, as on a tight-rope while focussing, and move with the utmost circumspection in getting at the dark slides, lest the whole arrangement, camera, rucksack, and operator, should go slithering down a hundred feet or so. For while sliding down these loose screes is a by no means unpleasant sensation, the sudden stop one is liable to encounter is anything but beneficial to the delicate mechanism of even the strongly-built "Sanderson" camera which I carried, and besides, I wished to photograph on subsequent days! However, with due care no untoward event occurred, though, I must confess, practised as I was in photographic matters, I felt quite a tinge of nervousness as to whether I had correctly estimated the necessary exposure—whether I

had really drawn the shutter, before taking off the cap, and other items, with which every photographer will be familiar. During the development of that particular plate, too, my mind was much exercised. For some reason or other, I made only one exposure on this particular plant, so that, as in the proverb, "all my eggs were in one basket." What should I feel like if it should prove to have been over-exposed, or under-exposed, or not exposed at all?—Did the bag containing my plates get too much shaken up on the back of the post-mule, during its journey up the Turtmann valley?—These and other horrible possibilities flashed through my mind, during that awful period known as "waiting for it to come up." I need not have worried, however, for a more orthodox negative never was developed, and the reproduction on page 204 gives a good idea of the charming little plant as we saw it, and hundreds of others, nestling in their rocky home, and gleaming at us with their intensely azure eyes. The photograph also clearly shows the minute leaves, which form the tiny rosettes—each thickly covered with silky hairs, causing the plants when not in flower to appear like wads of greenish-grey cotton wool. It is this hairiness which renders it one of (if not) *the* most difficult of the alpine plants to grow in our English climate, where, instead of the covering of dry snow, which it enjoys in the mountains, it is subjected to the changeable, though mostly moisture-laden air, generously supplied

with dirt, and smuts, which poison and eventually rot the silky tufts.

After securing the first exposure, I made another, showing in a more general manner the way the *Eritrichium* lay dotted about upon the rocks in small tufts, interspersed with the *Primulas* and *Silene*. This is especially interesting, as it illustrates the profusion in which the *Eritrichium* abounded.

Having completed the portraying of the plants, the next thing to do was to collect them. Where the tufts grew in crevices in the outcropping rock, this was quite impossible, but in the loose stone scree it was easy to secure every fibre, particularly as the roots did not descend to any considerable depth. Owing to the woolly character of the leaves, these tufts are very liable to mildew during their journey to England, and this is especially the case if they are collected while moist, either from rain or mist. Fortunately the morning was brilliantly fine, and the tufts quite dry, and they eventually arrived home in excellent condition. A proportion of them are still alive, though, of course, as with so many alpins which have, almost of necessity, to be collected while in flower, the removal of them at that season is extremely trying.

Having carefully packed into our rucksack as many of these charming little plants as we desired, without in any way appearing to have diminished the vast multitudes on the cliff-side, we gathered up our kit and took a reluctant farewell of that precipitous slope,

bejewelled in every nook and cranny with this gem of the higher alps. Whenever *Eritrichium nanum* favours me with its dainty flowers in the garden here, my mind will fly back to the craggy precipice high above the Turtmann valley, engirdled with glittering snow-covered mountains, where once, and once only, I saw the flowers in all their rich and unparalleled beauty.

Turning our back sorrowfully upon this rich treasure ground, we renewed our tramp, first across short turf, dotted freely with dwarf forms of *Ran. glacialis*—then over several large snow slopes, whipped into an irregular surface by the wind, much as the outgoing tide leaves the sand on the seashore, till we reached the base of the last rockfall, which rises abruptly to the pass itself. Several times already we had crossed some exceedingly rough ground, but this last buttress looked appalling. Trying as had been the "going" over the hard-surfaced snow incline, it had at least covered up the inequalities of the ground. We now had a vast pile of stone blocks to scramble over, most of them varying from the size of a small cottage, down to five or six feet cubes, thrown about in the utmost confusion, most of them having come to rest with their jagged and pointed ends uppermost, while down in the cavernous spaces at their base rumbling water could be heard, though not seen. Nor was this rough portion of small extent—indeed, from below it looked a good mile across—but in reality was some five hundred yards in width.



ERITRICHUM NANUM.



R.A.M.



Having been taking some photographs just previously, I had unwisely stepped on to this rockfall, with the camera under one arm, while the other was occupied with my alpenstock. By the time I realized that the kit would have been a great deal safer in my rucksack, thereby leaving my hands free, I was too far "on the rocks," in more senses than one, to advantageously get back, and yet found the ground much too irregular to permit of packing up the kit. Consequently I had to make the best of it. My porter told me it was quite easy, and that we should soon be over, and proceeded forthwith to skip from one craggy point to another, like a goat, but with both hands occupied, and a very breakable baby in one of them, I essayed a more cautious crossing, but before long found myself getting quite used to it, and even skipping in the orthodox manner.

After zig-zagging half way up, crimson patches which measured fully twenty yards by sixty or eighty, came into view, and there, in places where the interstices had to some extent become filled in, lay spread out before us sheets of *Sax. oppositifolia* in every shade of colour, from pink to rich crimson. Rough ground or no, the camera had to be brought into position somehow, and exposures made on this beautiful picture, illustrating how abundantly these high mountain plants flourish within a few feet of rough and rugged desolation. Taking the precaution to pack up my kit this time, we again proceeded, bearing to the left, under the

base of the dark and scowling Schwarzhorn. Suddenly, my porter, who was a few yards ahead, turned and shouted excitedly, "Gemse, Gemse," at the same time pointing to a boulder-strewn ridge still further away. Dashing up to him with what speed the rough ground would permit, we keenly scanned the ridge he was pointing to, but alas! we were a second too late. The Chamois, or Gemse, as the peasants call them, had bounded out of sight. This was all the more tantalizing, as we had been keeping a sharp look-out the whole morning for these pretty mountain antelope, knowing that we were in one of their favourite haunts. However, to please my guide, and reward him for his keenness, I made a photograph of him as he had appeared when calling our attention to them, and the reproduction on page 144 gives a good idea of the rockfall in the foreground, the rugged ridge beyond, over which the quarry had disappeared with such immense rapidity, and in the middle distance a huge semi-circular, basin-like depression in the snowfield, some twenty feet deep whipped out by the swirling winds.

An incident occurred just after this which illustrates the difficulties of photographing alpine plants in their native fastness. It had also a humorous side, and taught me that man had much to learn from the Chamois in negotiating steep ascents. Like a true collector, I had been scanning the rocks for any new flowers of interest, when I espied far away, high up the almost perpendicular cliff-side, a faint indication

of pink. The colour was so soft and pure that it certainly could not be more of the *Sax. oppositifolia*, and yet if not a pale form of that, what could it be? The only alternative which occurred to me was *Androsace glacialis*, and yet at that distance it must be a fair-sized and freely-flowered piece to be so plainly visible. Transferring the camera rucksack to my porter's back, and taking only my 'stock, I started up the steep stone scree to investigate, telling him to come on after me should it prove to be what I hoped.

Imagine a steep rock face, some 200 feet high, with a loose stone slide running down from it, at as steep an angle as such detritus can lie. At each step on this incline a barrowful of rubbish slid away, bringing me down to within a few inches of where the last step had been taken from. Foot by foot I zig-zagged up this track, several times coming down to near my starting point; in course of time, however, and with extreme care, I arrived within a few yards of my quarry, and sure enough there was the most beautiful tuft of *Androsace* we had yet seen, in full flower, exposed to the fierce sun all day, and measuring some six inches across.

While the scree had hitherto consisted of loose stuff, with a rather larger lump embedded in it here and there, the last yard or so was composed of small chips and grit only, while the plant was growing at the side of this river of rubbish, near a small hummock of outcropping rock. Feeling rather uncertain of the

foothold above, I was confident that if I could only reach this rocky outcrop, near to the plant itself, I could draw myself on to firmer ground, and with this end in view I cautiously reached over and grasped the rock, and drew myself gradually upwards and towards the more solid part. When within a few inches of the plant, and lifting up my foot to make the last step, without the usual warning, the other foot, to which my whole weight was then transferred, started downwards. Clutching vigorously at the rock which I had previously used, to prevent myself slipping further, I must have been too hasty, for the rock, which had appeared so firm, parted company with the main outcrop, and down I went in a most picturesque attitude, in a hideous jumble of stone, grit and dust. As I was face down on this moving mass of rubbish, and going with great speed stern first, I had not the advantage of the view, but from the sounds of merriment below, I must have presented an amusing spectacle. Fortunately, some of the larger stones became jammed below me, and I came to rest about half-way down, none the worse for my hurried descent ; my alpenstock, which I had been unwisely holding loosely when about to step (as I thought) on to firm ground, followed me.

Gathering myself together, after a pause for breath, I recommenced the ascent, this time with added experience, and in due course reached my goal. Realizing that I might not get another chance of so excellent a plant in a position at all within reach of the camera, I

decided to try and get a negative of it, though its position was anything but favourable. Signalling to my porter to come up, I utilized the time in preparing the ground as far as possible. With some trouble I managed to accumulate in the sloping *débris*, a few lumps of rock which locked together sufficiently to form a foothold, and when my kit arrived my assistant was able to stand on this fairly stationary position. The only possible place from which I could reach to focus was on a turfy knoll, some four inches square, which would accommodate one foot only. My porter, who was an extremely good fellow, quickly realized my predicament, and readily put himself into such a position, as would enable me to get a secondary footing on his shoulder. Rigging up my camera with extreme care, and being prepared for a universal collapse at any moment, I managed to get "focussed up," helping myself to the various lenses and darkslide from the rucksack as it rested on my porter's back, just within my reach. Having ascertained the requisite exposure, I was about to draw the shutter, when, to my disgust, I found there was not sufficient room to get it fully out, without first moving myself.

Here was a fix; if I varied my position more than an inch or two I should probably have upset the whole concern. After a moment's consideration, I decided on a rather novel proceeding. Taking two points on my camera, and a third on the adjacent rocks, I sighted them as with a rifle, then gently swinging the instru-

ment round upon its tripod sufficiently to free the darkslide, I drew the shutter, and returned the camera to its original position, judging by the sights I had taken, the exact place it should occupy. Then I made the exposure, repeating the former operation so as to close and remove the darkslide. Just to satisfy myself that the whole of the Androsace was centrally arranged on the plate (a point needing considerable care when a long focus lens is being used, so as to secure a large image), I swung back the camera to its former position, when to my delight the picture was occupying just the spot I desired. Judging it unnecessary to make a second exposure, I packed up the kit (a delicate matter in that sort of position) and prepared to descend the scree up which I had toiled so laboriously. Before following my porter, who had again taken the camera 'sack, I collected a few promising pieces of the Androsace, so that when I stepped on to the incline of shingle he was a little way ahead of me. I had barely proceeded ten or twelve feet when I heard a shout of warning from below, and looking up (or rather down) I saw that he had "started" a large quantity of detritus, which was gaily slipping down the slope. Luckily for my camera, he was near the edge of the stone slide, and so able to check his descent. I, however, was not so fortunate, being caught in the middle of the scree, across which I had been zig-zagging, and almost before I had time to realize it, I was speeding down the incline, quickly overtaking my porter, and



finally being deposited on a large slab of stone, near to the place I had originally started from. As on this occasion I made the journey in a sitting position, I had experienced almost the same sensations as when glissading, except that snow is considerably smoother to sit on than angular pieces of stone, particularly when the said stones are continually turning round, so presenting fresh angles for the happy voyager to recline upon! Had it not been for the quantities of detritus following close behind me, necessitating a hasty movement to avoid being overwhelmed by them, I should have thoroughly enjoyed it. As it was, I entertained considerable doubts of my suit holding together till I reached home!

As in the case of the *Eritrichium*, the plate, when developed, produced, much to my joy, a particularly satisfactory negative, and the illustration on page 196 shows the flower-mantled tuft of the *Androsace*, which gave me such a strenuous half-hour. It will be noticed how the pink blossoms almost entirely hide the foliage; when seen in all its natural beauty of colouring the *Androsace* is indeed a jewel of the first water, well repaying any trouble required to secure a good portrait of it.

The weather, which had hitherto been so gloriously fine, now showed signs of changing—large banks of vapour settling down upon the snow-clad mountains around us, while ever and anon wreaths of mist would drift up to us, as the wind blew them along the funnel-

shaped Grubenalp, towards the pass. Thinking that the change might be the forerunner of rain, we made our way up the remaining portion of the rough track, to the pass itself, noticing considerable patches of *Ran. glacialis* among the soaking shingle.

From the neck of the pass a splendid view is obtained of the Schwarzhorn, as it rears itself in a conical-shaped peak on the left hand, the meaning of its name, the "black mountain," being very apparent, as we noted its rough, dark-coloured, rock-strewn face, almost devoid of snow. On our left hand, and rising from the smooth, saddle-shaped depression which forms the pass, is the jagged shoulder of the Steinhorn, one vast rock-fall, with here and there huge patches and undulating drifts of *Sax. oppositifolia* mantling its less precipitous parts. Looking due east—where, on a fine day a beautiful view is obtainable of the Simplon group, across the deep and narrow Zermatt valley—the cloud masses, which had been steadily thickening, prevented our seeing to any distance. We noted, however, in that direction the snow lay much more generally over the ground, in many cases to a considerable depth.

Turning about—thus facing the Turtmann valley, the beautiful range of mountains on that side were also fast disappearing, and only here and there could we get a glimpse of the peaks through some wind-torn opening in the cloud wrack. On the extreme top of the pass, nestling amid shaley pieces of *débris*,

*Androsace glacialis*, in small tufts, gleamed at us, while the Glacial Buttercup grew quite plentifully near by.

As the air was decidedly chilly, now that the genial rays of the sun were withdrawn, we decided to wend our way back to the hotel, so after adding our quota to the small cairn of stones which marked the top of the pass, we prepared to descend. A feature which struck me as curious was that all the *Ran. glacialis* which we found growing at that high elevation, and away from the ample ice-cold stream in which we first noticed it, had their leaves covered with fine white hairs, giving them a heavily felted appearance. In the descriptions I had previously obtained of the plant, it was always referred to as having deeply cut and glossy leaves, and certainly the specimens we found so plentifully at lower elevations were of this character. Possibly the higher altitude, and the comparative dryness which plants in such a position have to endure (since when the snow-mantle is once off them there was just there no higher snow-covered ground which would continue the water supply, as would be the case on a terminal glacier moraine, and many other situations), may account for this curious variation, tending, as it doubtless does, to check the too rapid transpiration of moisture through the leaves.

On the downward journey we traversed the more southerly part of the rock-fall, noting the great variety in the colour of the *Sax. oppositifolia*, which

plant in places alternated with the spreading foliage of *Dryas octopetala*, or Mountain Avens, surmounted by myriads of pure cream-coloured cups. Occasionally we came upon small tufts of *Draba aizoides*, wedged into crevices, its deep green cushion of somewhat spiny foliage contrasting vividly with the bright yellow flowers.

As is always the case when descending, the high cliff, which had called forth so much energy to scale, now appeared to rise behind us in leaps and bounds, and before long the intervening folds of the ground hid the actual summit of the pass from our view. Both on our journey up and again on our return we noticed snow bunting, the birds exhibiting their curious, drooping flight. The plumage of this bird is rather attractive, being white on the under-side, with white neck and white wing coverts. The tail feathers are black, except the outer ones, which are white, while the flight feathers in the wing are also black. Although the markings produce such a strong contrast, it is surprising how readily the bird becomes lost to view amid the surrounding snow and dark rock background.

Bearing to the right, when we reached the base of the last rockfall, we recrossed the snowfield through which the sparkling rill meandered, though further to the north than we had done in the morning, and near to its extreme edge, upon stony ground only just uncovered by the snow, we found quantities of *Anemone vernalis* just opening their shaggy flowers. Further

on, where the rock outcropped to a considerable degree, *Silene acaulis* made beautiful pink cushions, while in the clefts, often overhung so as to form miniature caverns, *Primula hirsuta* was packed in myriads, all gay with their rosy flowers. Some of these *Primula* colonies were so charming that I made an exposure on one of them, and the reproduction on page 188 shows them garnishing this crevice. It also shows how small the rosettes of foliage were in proportion to the size of the flowers, at this elevation (roughly 8,000 feet). Some of the best forms of these plants we added to our "bag," though I do not expect they will retain their special character in my London garden. When in the Oberland, I collected many bright forms of *P. viscosa* with equally small rosettes, but though they are growing well, their foliage is larger, and the flowers much less brilliant, the latter due, I imagine, to the poorness of the light near to the great city.

By the time we reached the edge of the Grubenalp, the weather had so far improved as to favour us with intermittent gleams of sunshine, so we selected a comfortable spot where a steep-faced bluff broke the force of the wind, which was still keen, and threw ourselves down on the velvety turf, all spangled with *Ran. pyreneaus* and *Viola calcarata*, to rest awhile and admire the outlook. From where we lay, the whole Meiden side of the valley was spread out before us—from where, in the far northern distance, the soft bluish void denoted the great Rhône valley, right up

to the Turtmann glacier on the south. The ever-varying play of light and shade upon the glittering facets of the glacier ice was particularly fascinating, while the fantastic shapes of the cloud-wreaths, which hung about the mountain-tops, gave full play to our imagination. From the base of the deep pine-clad valley, upon whose rim we were, arose a musical jangling, which we recognised as cow-bells; evidently during our absence the cattle had been driven up from the lower pastures and were now quartered in the old châteaux near the Schwarzhorn Hotel. Very pleasant was the distant sound of the bells, with one of which each cow is decorated, as, wafted by the fluctuating breeze, it reached us, now clearly, now softening away into the far distance as the wind varied its force or direction, only to return a moment later, in all its soft and mellow cadence.

Having lazily idled away a very enjoyable hour, we resumed our walk, which now led past the deserted châteaux we had noted in the morning, and down the steep grassy side of the alp. Passing through thickets of *Rhododendron ferrugineum*, sheets of mountain pansies, and *Myosotis alpestris*, we rapidly descended to within sight of the hotel, when the Oak fern again swept in masses along the stony track.

The meadows down by the Turtmannbach, which the day before had been silent and deserted, were now alive with herds upon herds of cattle, some feeding upon the lush grass, others being driven still further up

the valley to the châteaux we had passed on our way towards the glacier. Mingling with the cows were a few pigs and goats, all making the most of the delicious supply of food they had suddenly come upon. Many were the combats which took place during the next day or two, to decide which of the many animals, brought together for the first time that season, should be recognised as leader.

When we reached our rooms we carefully emptied our rucksack and packed up the precious contents, adding no further moisture than that contained in the tufts of soil about the plant roots, afterwards proceeding to remove some of the travel stains inseparable from so enjoyable a day in the mountains.

## CHAPTER XVI

### THE MEIDEN PASS

ALONG the southern side of the Schwarzhorn Hotel runs a glass-fronted lounge, which commands a magnificent view of the head of the Turtmann valley, from the glittering snow-capped peak of the Weisshorn and the adjacent glacier, pass the Kaltberg and Blummattalp, to the Meidenalp, with the conical mass of the Meidenhorn towering above it, while still higher and somewhat to the right, the elevated plateau leading to the jagged peaks surrounding the Meiden pass appeared almost opposite. In this pleasant room we frequently breakfasted, watching the drifting cloud masses veiling and unveiling the surrounding mountains. From an artist, who was staying at the hotel, we learnt that in the thin pine wood on the upper part of the Miedenalp there were quantities of the beautiful St. Bruno's Lily, *Anthericum liliastrum*, a choice plant about eighteen inches in height and very slender in growth. We therefore decided to make our way towards this alpside, and try to get some photographs, especially as we had not as yet visited that locality.

Shouldering our rucksacks, we set out on a fine morning when there was very little wind, hoping to



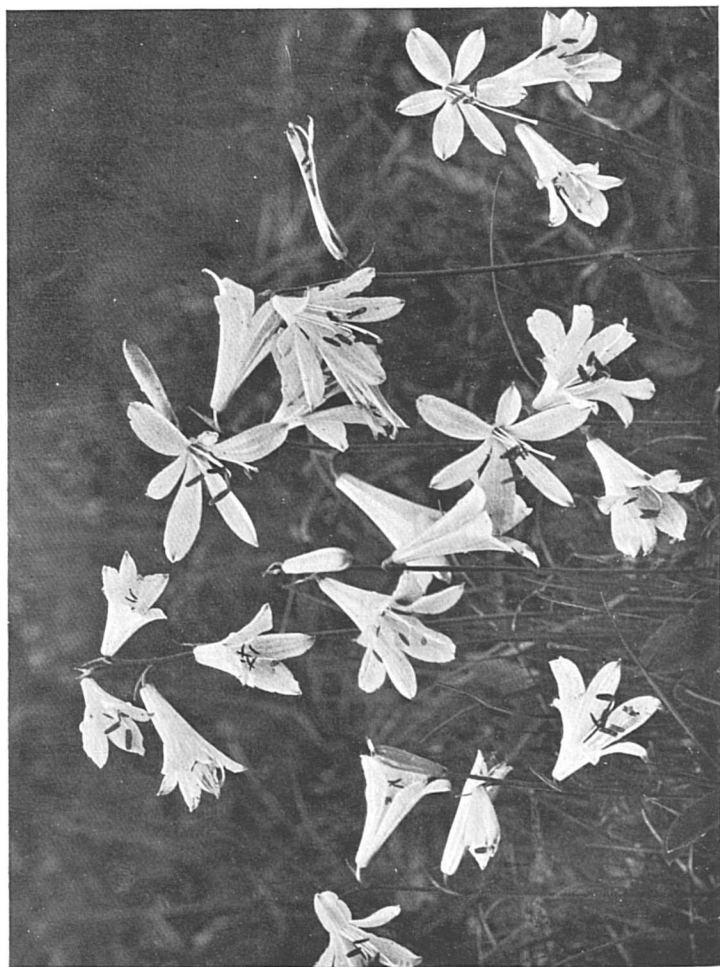
find the plants at the spot named. Crossing the rough plank bridge, we mounted the steeply rising ground on the farther side of the Turtmannbach and plunged in among the trees. As on the Gruben side, the track mounted abruptly from the stream, zig-zagging over the rough ground, occasionally obstructed by fallen pine-trees, doubtless brought down during the winter storms. In somewhat gully-shaped depressions running up the hillside we came upon masses of *Ranunculus plantanifolius*, making sheets of white where their flowers, poised on tall branches, swayed in the gentle zephyrs. This vigorous buttercup is closely allied to *R. aconitifolius*, the chief difference being that the latter usually favours more open, sunny situations. Having made a satisfactory photograph of these plants, we pushed on, still mounting rapidly past quantities of *Orchis purpurea* and *Habenaria bifolia*, intermingled in rather dryer positions with the diminutive purple flower spikes of *Habenaria angustifolia*. In a few places we came upon colonies of that quaint little fern, *Asplenium septentrionale* tightly wedged in rock crevices, and we found it an extremely difficult subject to remove. By driving our stocks into the crevices and gently levering the rocks apart, we managed to secure a few plants with abundant roots, these, upon arrival in England, were planted in somewhat similar positions, and show every promise of becoming established.

The breeze, which hitherto had been very gentle, now showed signs of becoming more vigorous, and by the time

we obtained our first glimpse of the Anthericums, growing in stretches one hundred feet above us, the wind was quite boisterous. Rapidly scrambling over the intervening ground, which was densely covered with a thick scrub of *Vaccinium myrtillus*, we came upon quantities of the lilies, looking, from a little distance, like dazzling snow-drifts. It is difficult to imagine anything more beautiful than a stretch of irregular mountain side, white with billowy waves of these lovely flowers, rising from a carpet of short turf, thickly sprinkled with cream and purple orchis, interspersed with outcropping mossy boulders, while over all, the shafts of sunlight, glancing through the thinning pine trees, dapple the whole with brilliant patches of light. Having previously seen this lily only in isolated groups in the garden, it was a revelation to find it growing in such abundance, and it was some time before we could bring ourselves to rig up the camera so as to secure a record of them.

While viewing the plants, they had appeared to be fairly still, but as soon as all was ready to make the exposure, they were found to be dancing about in a most provoking way. Whether it was that we had not paid the same keen attention to them before, or that the wind had really increased in force, it is difficult to determine, and the photograph which had appeared so easy to obtain, proved to be one of the most trying. After waiting most patiently (or was it impatiently?) for more than half-an-hour, ready to take advantage of





THE BEAUTIFUL ST. BRUNO'S LILY (*ANTHERICUM LILIASTRUM*).

a possible lull in the now strongly blowing wind, I secured two or three exposures—thinking myself very fortunate to have obtained any at all, and particularly pleased, since we did not again come across so suitable a patch for photographing while in the Turtmannthal. Judge of my disgust, when upon developing, all these plates (and three others) proved to have been twice exposed: due, doubtless, to carrying on a conversation with my companion while changing, and thereby inadvertently picking up the exposed plates, thinking them to be new ones. However, as I shall record later on, I secured a further picture of the lilies in another district, resulting in the reproduction opposite. This, I think, gives a very good idea of their beautiful and dainty form.

Resuming our tramp, we in due course reached the limit of the pine trees, where we decided to rest awhile—in a sheltered spot, away from the full force of the wind.

From this elevated position we obtained a glorious view across the valley towards the Grubenalp, with the dark rock-clad summit of the Schwarzhorn sharply defined against the almost cloudless sky. Deep down in the valley at our feet lay the collection of chalets beside our hotel, while the small fawn-coloured objects, moving slowly across the turf, were the cattle, which had so recently invaded the region. The silvery streak meandering along at the base of the pine-clad slopes and extending to the foot of the sparkling glacier,

was the roaring torrent, forty feet or more in width, which we had wandered by on a former occasion, while the snow-clad peaks of the Weisshorn and Brunneghorn, towering above the glacier, dominated the view in that direction. Immediately above, to the west, the naked pinnacle of the Meidenhorn frowned down upon us, a curious conical mass of rock, rising abruptly from the surrounding snowfields, and reaching an altitude of 9,920 feet.

Having been entirely absorbed by the beauty of the scenery, it was not until an unpleasant irritation in that portion of our bodies nearest the ground, awoke us from our reverie, that we discovered the earth around us was literally alive with myriads of giant brown ants. Beating a hasty retreat, we completed our lunch in a somewhat less frequented spot, and then hunted about for specially good forms of *Viola calcarata*, which here grew in such vast multitudes as to purple the ground as far as we could see. Until one has seen the flora in the higher alpine valleys, it is difficult to realize how immeasurably generous many of the plants are, spreading their brilliantly-coloured and daintily formed blossoms to the welcome sunshine, in such countless myriads as to entirely hide, not merely their own foliage, but the turf through which they grow.

An interesting feature in connection with *Viola calcarata* is that, despite its vigorous constitution in the Alps, it is rarely seen flowering in our gardens, no matter

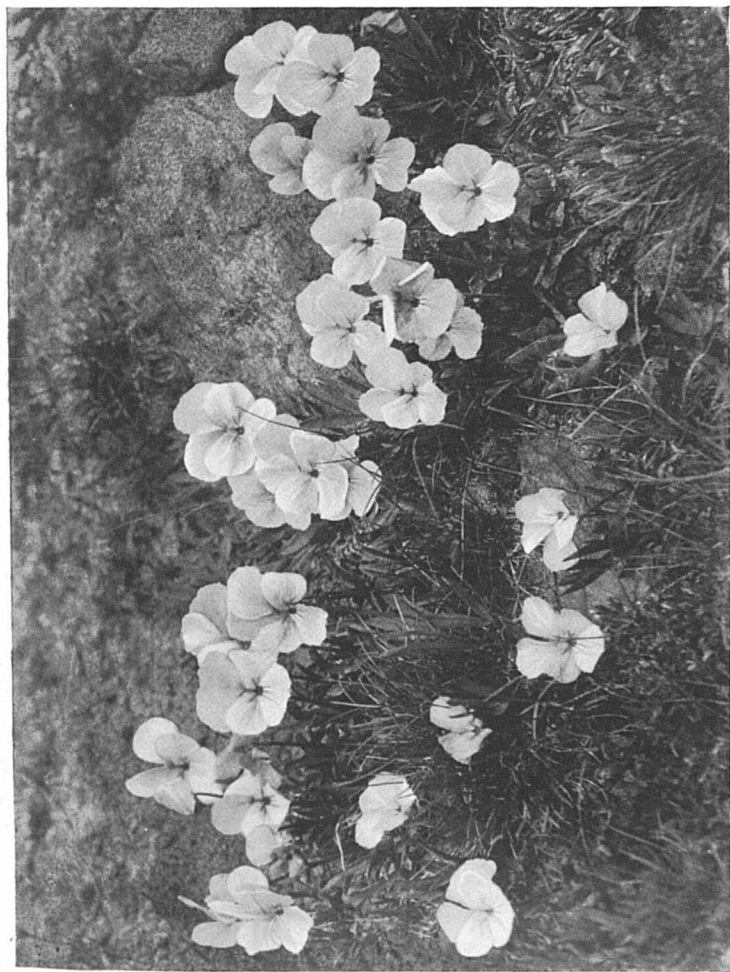
what treatment we give it. From my own experience, it is by no means uncommon for the plants to produce quite a number of extremely promising buds, but having reached this stage, causing me to feel quite confident that in a week or so I shall have a beautiful display, they proceed to shrink and wither, thus causing my hopes to sink to a point somewhere below zero. On the sunny slopes of the Meidenalp, the flowers were extremely varied, both in colour and outline; some being quite pale lavender in tone, others rich purple: the blossoms in some cases were "thin," with spaces between the petals, while others were full and rounded, almost equalling the garden violas in size. We selected the best shaped, and richest coloured forms, and upon attempting to remove them were surprised to find how deeply they rooted. Frequently a tuft of eight or ten flowers would be traced back to three or four insignificant little straggling growths of foliage, which in turn would wander as colourless underground stems for a considerable distance, finally sending deep into the stony ground fine thread-like fibres which were very easily damaged. We were anxious, if possible, to secure the pure white form which sometimes occurs (though it would appear but rarely in that valley), and we searched long and diligently for it without success. We had just decided to push on still further, when a tuft of white, some little distance away, caught my eye; this, upon closer investigation, proved to be none other than *Viola calcarata alba*, as pure a white

form as one could wish to see. I need not describe how carefully we unearthed this treasure, dislodging the firmly embedded stones from about its roots so as to ensure every fibre being undamaged. Wrapping it securely between some leaves so as to separate it from its more ordinary brethren, we consigned it to the rucksack, and upon arrival in England it was most carefully planted in the moraine, with a small addition of leaf-mould, where it is now thriving, though whether it will be any more generous with its flowers than other specimens of this plant which I have grown, remains to be seen.

As the weather continued so delightful, we decided to push on to the snowfields which lay above the second Meidenalp, rising then in a gentle incline towards the Pass. Imbedded in this high snow-covered plateau (we were told) was a small lake, lying like a jewel, in its setting of gaunt rugged crags, the placid waters reflecting the blue sky above, and the adjoining steep-faced Meidenhorn. From the lip of this mountain lake flows a tiny rill of sparkling ice-cold water, gaining volume as it approaches the grassy alp, over the edge of which it tumbles in a series of foam-flecked cascades, before bounding down the steep hillside in a deep groove it has carved for itself, margined with colonies of the Bird's-eye Primrose, and patches of *Sax. aizoides*.

Just above the tumbled waters of this rill, and within a few feet of the melting snow, the recently uncovered rocky ground was spangled with the lovely crocus-like





AN ALPINE PANSY (*VIOLA CALCARATA*).  
(See page 222.)



THE SHAGGY WIND FLOWER (*ANEMONE VERNALIS*).

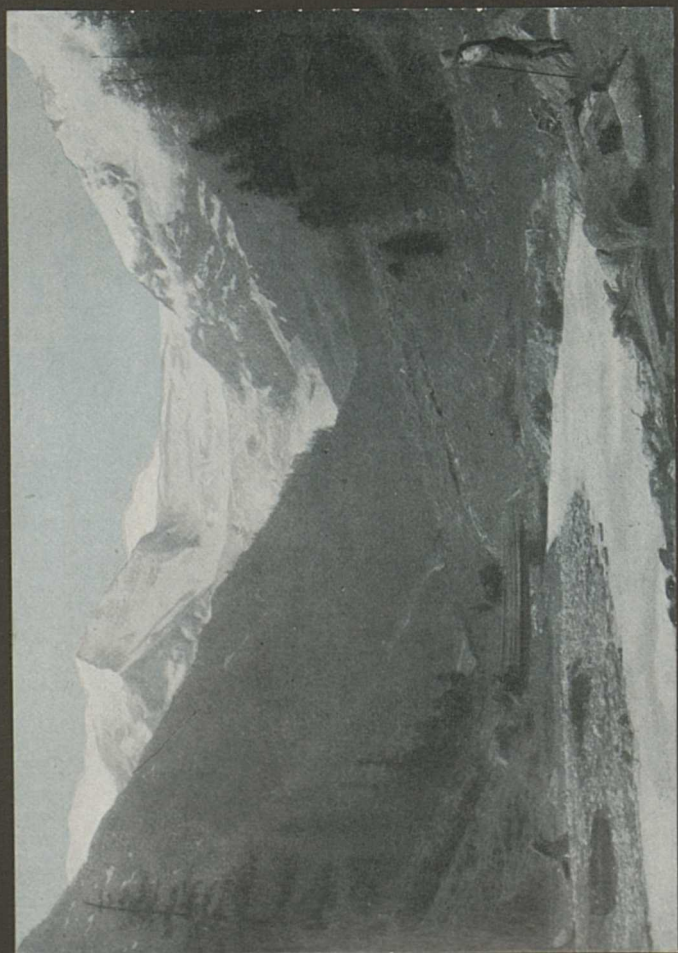
flowers of *Anemone vernalis*. See opposite. This dwarf alpine wind-flower is one of the first to open its blossoms to the warm sunshine—when the thick blanket of snow has at last been dissipated by the advancing season—frequently competing with the Soldanella for the honour of being the first to welcome the return of Spring.

Few flowers possess the purity and charm which, to my mind, characterizes *A. vernalis*. Among the few deeply divided and somewhat hairy leaves which lie pressed to the ground, a large, carefully protected bud matures during the winter months, and as soon as the first touch of summer reaches it through the thinning snow, this bud begins to rise. When the enfolding bracts expand, there emerges a beautifully soft, brown, shaggy calyx, which, when some two inches high, opens, disclosing a somewhat crocus-like flower, white in colour, shaded or flushed with delicate amethyst on the inside, and backed by the silky brown sepals which are such a distinguishing feature of the plant. When the flower is over the organs are again enveloped by this hairy covering, and the stalk, instead of remaining erect, elongates and droops in a most graceful manner. When one comes suddenly upon a colony of these nodding, embryo fruits, with the sun slanting upon them, and lighting up the individual hairs, the effect is one never to be forgotten. In common with several of its relatives, this anemone, though so dwarf, is a deep-rooting plant, and especially fond of rocky

ground, where its woody roots become wedged into some tiny fissure, and defy the collector, unless the stones are small enough to be taken out bodily. Occasionally one can find plants growing above a large buried slab of stone, and if this is only a few inches below the surface, the roots appear to wander over its face, presumably in the endeavour to find a crack into which they can penetrate, and here they are very easily and satisfactorily removed.

Unfortunately in our gardens *Anemone vernalis* has not a very good reputation, the large flower buds which form in the autumn frequently attempt to rise just as our winter approaches, and this usually results in mildew ruining them, and not infrequently the whole plant. I have found that the best position for it in my garden is the moraine, where it can root as deeply as it pleases, and yet always be well drained, though moist. Seed also (provided it is fresh) germinates freely, and if the baby plants are pricked off in an early stage, they usually thrive well, and this, I feel sure, is the best way of obtaining reliable plants.

After having photographed the Anemones *in situ*, using a medium-light filter, so as to ensure as much gradation as possible in the yellowish-brown calyx, we collected such plants as we required, and proceeded to traverse the snow-field towards the lake. From this exalted position the view was beautiful beyond description, the steep pine-clad sides of the Turtmann valley having completely disappeared, the snow-covered fore-



THE TURTMANHALL.



ground provided by this high plateau and the distant upper Grubenalp also bearing its winter mantle, appearing to be separated only by a small strip of bluish vapour. All around us was the silent and impressive mountain world—no sign of man or his puny attempts at building were there to jar or interrupt our contemplation of the mighty grandeur of the mountain architecture, as ridge after ridge soared into view through the clear air of those high altitudes, leading us to suppose that the pink-flushed summits away there to our left were merely half a dozen miles off, instead of being the distant snow-clad peaks of the Bernese Oberland.

By means of our glasses we were readily able to identify the dark-coloured, rocky waste below the Augstbord Pass, which had, on a former occasion, proved such an Eldorado for alpine treasures, and we realized how aptly our hotel was named, as the vast bulk of the rugged Schwarzhorn reared itself immediately on the left of the pass.

While engaged admiring this beautiful prospect, one of those sudden changes, so frequently met with in the mountains, was taking place; the air which hitherto had been so remarkably clear, now became dimmed with haze, while the previously cloudless sky was obscured by threatening masses of vapour, wrapping in their soft folds the glittering peaks about us. The wind, which had been strong, now greatly increased in force, and almost before we could realize it, we were

engulfed in a perfect hurricane of driving snow. It was with some difficulty that we donned our water-proofs, and made what speed we could through the blinding flakes to some sheltering rocks, from whose shelter we were able to view the sudden squall with some amount of comfort. Not only had the extended panorama we had so recently been enjoying, entirely vanished as if by magic, but rocky outcrops, only fifty or sixty yards away, were dim and ghost-like, and but for our tracks across the snow it was impossible to tell which way we had come, or in which direction lay our valley.

After crouching in our temporary shelter for some twenty minutes, and having become almost frozen (the temperature falling extremely rapidly at these elevations as soon as the sun is obscured) we began to look upon this exhibition of the aerial forces, as anything but pleasant, and though the snow had somewhat lessened, it looked as if we were in for a thoroughly bad time for the rest of the day.

Not wishing to retrace our steps until we had seen the lake, which we had heard so much about, we decided to face the elements, so leaving our protecting rocks, we trudged across the snow, which, though fairly hard in some places, was extremely soft and treacherous in others. By the time we had traversed two-thirds of the gently rising snow-field, and having failed to get a glimpse of the sparkling waters of the lake, we began to wonder what had become of it, and it



was only after a more prolonged search that we realized that it was entirely obliterated by the thick covering of snow. It is hard to realize that even in a normal season July finds these high passes still heavily snow-covered. As far as plants were concerned, we had had this latter portion of our tramp for nothing, except that on many of the outcropping boulders which had become free of their wintry covering, the small yellow crucifer *Draba aizoides* was plentiful, though scarcely more than one inch in height, including its tiny flower stalk.

Having noted all there was to be seen, which under the wintry conditions of swirling snow did not amount to very much, we decided to beat as hasty a retreat as possible. Retracing our steps to the lower Meidenalp, we there found that the snow had given place to rain, which was coming down with such vigour as to render shelter advisable. We therefore invaded one of the wooden châlets, which later in the season are occupied by the peasants who look after the cattle. These tumble-down buildings are extremely primitive, strongly suggesting habitations for patients undergoing the "open-air cure." Perhaps they are especially built so as to enable the occupiers to keep an eye on the outside world without leaving the premises; certainly we found that the chief source of light (and draught) was the generous openings left between the planking which formed the walls. A summer night in one of these châlets, with the thermometer down

several degrees below freezing point (such as many we experienced during July), especially if accompanied by a strong wind, must be interesting, even if not conducive to sound slumber.

While waiting for the weather to moderate I noticed a brownish-coloured bird flitting about at some little distance from us, apparently in a very excited frame of mind. Frequently it would hover quite close to us, uttering a plaintive cry, as though in great distress. Looking round for the cause of this strange behaviour, I found, after a short search, the little creature's nest, built on the window sill of a neighbouring chalet to the one we were sheltering in, and in it were five pale brown eggs. Upon leaving this shelter during a lull in the rain, we were interested to see the agitated parent bird fly directly to the nest, doubtless greatly relieved that we had left its prospective family unharmed.

Hastening down the remaining slopes of the alpside at a truly breakneck speed (by leaping down the short cuts intersecting the zigzags, instead of traversing their whole length), we rapidly reached the stream, recrossed the primitive bridge, and found ourselves once more "at home."

## CHAPTER XVII

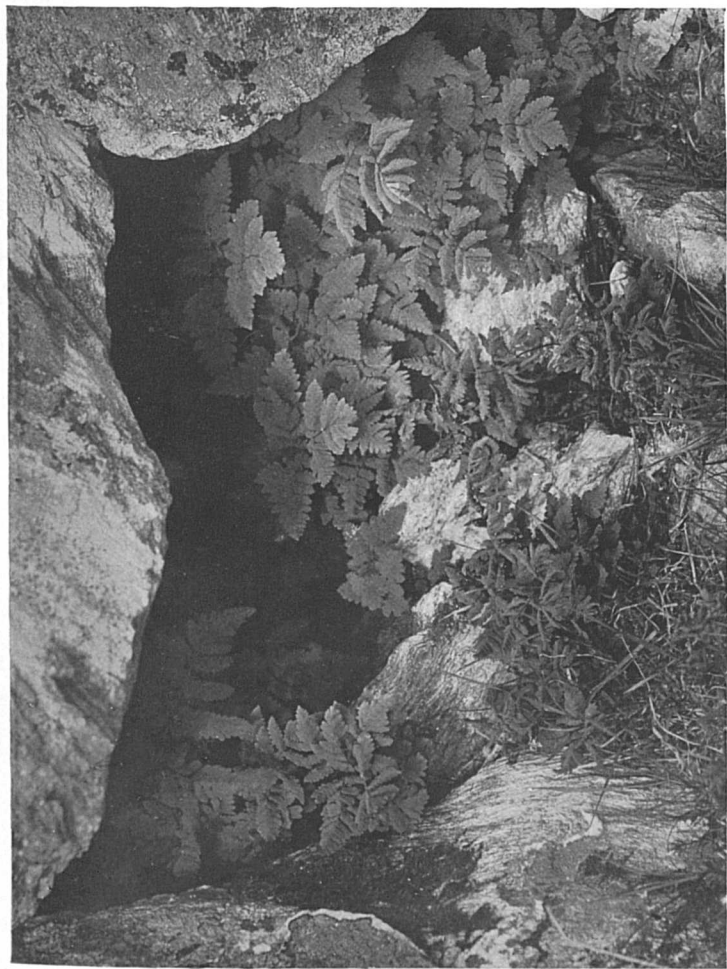
### A LAZY DAY

ON one or two occasions when the weather, early in the day, did not appear very promising—or was it that we were less energetic than usual, and used this merely as an excuse to ease our conscience?—we decided to employ our time near home, wandering about the grassy uplands bordering the glacier stream. Very pleasant it was, too, lying at full length on the velvety turf, watching the masses of cumulus drifting about among the neighbouring mountains, frequently veiling their lower slopes yet leaving the summits crisply outlined against the sky.

On these occasions it was pleasant to allow one's imagination to wander over the mighty changes that must have taken place in such a district through long periods of time. At some immensely distant date, the whole country must have been vastly higher than the topmost peaks are to-day. Mighty natural forces must have been at work through ages past, to carve out of the living rock the grand and awe-inspiring peaks, and the no less giant grooves which form the valleys. The immense, tumbled masses of fallen rock spoke eloquently of the giant rending force still being

applied by the silent (though none the less irresistible) freezing of the absorbed moisture in the fibre of the rock itself. The vast heap of detritus which forms the Turtmann moraine, and which stretches fully a mile below the existing glacier, affords some idea of the enormous amount of material which the ice stream is constantly bringing down, as it slowly, but surely, forces its way from the high *névé*, where it forms out of the consolidated snow, to the dark and rubbish covered foot, immediately above the tiny stream which it gives birth to.

On some of these slack days we would leave the camera, and take only the collecting 'sacks, making short excursions to secure a supply of the plants which grew so profusely in the immediate neighbourhood. A few yards from the hotel there was a rough, steeply inclined piece of ground, through which water was constantly soaking in great abundance. Here, in small depressions, where the moisture made miniature pools, we found myriads of Bird's-eye Primroses, growing where their roots were embedded in the soaking vegetable soil (mixed with a yellowish loamy material), while on the moss-covered margins of these "dishes" the shining, greenish-yellow rosettes of the butterworts appeared literally in thousands, the rich velvety texture of their violet-coloured blossoms showing to great advantage as we approached them from below. In positions such as this we were able to remove them with a minimum of effort, while



A NATURAL FERNERY, WITH OAK FERN (*POLYPODIUM DRYOPTERIS*),  
UNDER THE SHELTER OF ROCKS.



having our tin boxes on the spot, or very near, we had not even the trouble of carrying the plants more than a few yards. Just about that place, too, I was much struck with the beauty of the oak fern, growing in vast patches amid tumbled pieces of stone. I imagined that I should only have to lift these pieces of stone away, and I should find the plants practically ready to put in my rucksack! However, I was never more deceived in my life. To start with, the lumps of stone, which I had rashly considered to be small, proved to be the outward end of fairly bulky lumps which required all my force to even wriggle, while they were so tightly wedged together by other smaller and entirely buried pieces, that it took me a very strenuous half-hour to dig out two or three. As soon as the dainty foliage of the fern was disarranged (a circumstance almost impossible to avoid when pulling and hauling at the rocks) the whole plant seemed to lose itself, and when at last recovered the tough, black, thread-like roots appeared to descend for ever.

While at first sight it would appear that the numerous plants which grow through the short alpine turf prefer a more generous rooting medium than those which inhabit the stony wastes, my experience leads me to believe that the conditions a few inches from the surface are, in the majority of cases, very much the same. From the many examples which abound in this district of what I may call, "alps in the process of formation," it would appear that the continu-

ous weathering which is going on, resulting in the vast rock-falls, such as those we saw near the Augstbord Pass, is the first stage in their evolution. In course of time the fragments of the weathered stones become themselves weathered, and tend to fill up the interstices between the previously huge lumps. When this process has gone on for a sufficiently long time, seeds germinate among the finer *débris*, resulting in great stretches of foliage such as we saw of *Sax. oppositifolia* and *Dryas octopetala*. As these plants (and of course many others) extend, their earlier foliage dies, and in due course decomposes, thus forming the rich vegetable mould, which, in addition, to the decaying rocks, forms the chief "soil" into which the subsequent generations of plants root. In addition to this, no doubt a large amount of fine wind-driven particles are arrested by the presence of the earlier plants (as an example of the comparatively large amount of "soil" which will, in a short time, accumulate about any object, apparently beyond the reach of the earth, a piece of broken tile lying on a roof is a good instance, or the soil-like deposit so frequently found in the adjoining gutters), and tend in no small degree to enrich the rocky *débris* with vegetable humus, far above the tree level. If the foregoing process is continued for a considerable time, the original aspect of the broken stone waste is entirely changed, and its place is eventually taken by an undulating grassy alp, such as is beloved by those



plants which grew in such abundance near to our hotel. This suggestion appears to me to be a very probable one, and certainly accounts for the extraordinarily stony character of all but the thin upper layer of these high pastures. From these considerations, made at our leisure, among the higher alpine flora, it would appear that we could, with very great advantage, employ a much larger proportion of stony material in the soil of our rock gardens, than is usually the case at present, thereby obtaining a much more perfect drainage system, and at the same time securing the plants against drought, by providing this substratum of porous material; this would conserve a large amount of moisture which the plants could easily draw upon in time of need. It is extremely probable that the almost universal success of the moraine, which is now so popular, is due in no small measure to providing most, if not all, of these desirable qualities.

Since the arrival of the boisterous cattle on our especial preserves, and despite the short time which had elapsed, there was a remarkable alteration in the appearance of the undulating sward, in the immediate vicinity of the hotel, and the group of châteaux adjoining it. The gay mosaic, formed by myriads of alpine flowers, had vanished, having been greedily devoured by the animals. The lovely blue gentians, pink trusses of the Bird's-eye Primrose, drifts of nodding *Pinguicula* flowers, and the shaggy fruits of the *Geum montanum* had all been requisitioned for the

prosaic purpose of providing us with fresh milk and butter.

The behaviour of these small, but sturdy alpine cattle during the first few days of residence in their new surroundings, was extremely amusing. It appeared as though the invigorating air of the mountains had affected them, frequently causing sedate-looking individuals to suddenly throw up their heels, brandish their tails in the air, and scamper about, much as one sees lambs do on our South Downs. At times these riotous members would charge full-tilt into a peaceful group who were enjoying the luscious grass, and then would follow a wild stampede over ground which, to the uninitiated, would appear quite impossible for such heavy, four-footed beasts. Many times I saw such runaways, when endeavouring to pull up, after careering down a steep grassy slope, slide for fully twenty feet on all fours before coming to rest, when they would proceed with their meal as though nothing unusual had occurred. Among a large herd which came up to us one morning, were a drove of five or six pigs, these being under the special charge of two elderly and rather plump, peasant women. All appeared to go well while they were traversing the narrow track below the hotel, but as soon as the broader part above the chalets was reached the trouble began. It was, apparently, the intention of these ladies to drive their charges into one particular hut, but these comfortable habitations seemed to be the only

places in the whole district which the pigs had no intention of occupying. Round and round the châteaux the procession scampered, first the ungainly four-footed visitors, followed by the two-footed ones, then, when at last there seemed no escape for the truants, they would double sharply back, almost taking their pursuers off their feet by their sudden rush. After several such failures, strategy was employed in lieu of force, and by means of some specially dainty morsel, three, or even four, of the offenders would be securely penned. They were one too many for their captors, however, for upon the opening of the door to receive the last straggler, the whole consignment would come rushing out amid a chorus of squeals, which could have been heard upon the upper Grubenalp. Having nothing better to do, we watched this performance for fully an hour and a half, when, the light failing, the angry and exhausted "drovers" gave it up as hopeless, and on that occasion, at least, the "porkers" had a "night out."

Of the few plants which did not appear to be favoured by the cattle, was the small Spurge, *Euphorbia carniolica*, whose minute flowers, with rather decorative yellow bracts, had been liberally sprinkled over the slopes upon our arrival. By the time we had been there a week, the alpside presented the appearance of producing this Spurge and nothing else, since its little plumes, gently nodding in the breeze, were practically the only relics of the once gay company.

Not once during our solitary rambles in this secluded valley had we encountered any snakes—not even the common grass snake, which I had disturbed, on more than one occasion, in the Oberland—despite the fact that much of the irregular scrub-covered hillsides, seemed to provide such suitable habitats for them. Being curious in the matter, I mentioned the subject to our host one evening. He told me that on the Meiden side there were a few grass snakes, but none at all on our bank of the stream. This curious fact (seeing the easy means of crossing afforded by the wooden bridge) he assured me, was due to the presence, near to the hotel, of the tiny stone-built church, wherein the snakes (or serpents, as he called them) had been prayed away. This would appear to be a very easily applied remedy, and might, perhaps, be utilized with great advantage elsewhere!





GEUM REPTANS.

## CHAPTER XVIII

### THE BLUMMATTALP

HAVING heard a great deal about the beauties of *Geum reptans*, or Creeping Avens, which grows in the tumbled mass of rocks forming the highest shingles of the moraine, we wandered one day across the Turtmannbach, and ascended the wooded hillside till we reached the more open ground of the Blummattalp. This was the direct route, *via* the Pas de la Forcletta, to Zinal, and when we reached the upper alp, at an altitude of 7,680 feet, should have secured a magnificent view of the glacier and Weisshorn, but unfortunately the day in question was not very clear, the grey clouds wrapping about the snow-clad summits or dropping down so as to almost veil the crevassed surface of the glacier, hid to a large extent the clear-cut distance. The vast quantities of yellow Anemones, however, which strewed the grass at our feet made a beautiful foreground, while the rich colouring of the pine trees, sweeping down the incline further away, led the eye to the distant ribbon of white, meandering along the base of the valley, where the stream, issuing from among the *débris* at the foot of the glacier, commenced to flow along its boulder-strewn course. On the





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opposite side, the Giggiealp reared its steep sides towards the snow-patched summit, there being lost to view in the billowy folds of the vapour which extended towards the Weisshorn. The reproduction opposite shows well the atmospheric conditions of the morning, and also the ground over which we subsequently travelled before reaching the glacier.

The anemones through which we had been wading for some time, now became so thick that the whole alpside was yellow with their lovely blossom. Of the most pure sulphur colour, the blossoms of the windflower, rising on sturdy stems, twelve to eighteen inches from the ground, were of an extraordinarily uniform shade. Among the vast number which I saw and examined, I only remember three which deviated in any noticeable degree from the type, the tint of these three being deep cream rather than sulphur. The foliage, which is deeply cut, and has a fern-like appearance, grows into bold hummocks, and being of a deliciously green tone, forms a background of extreme beauty, against which the golden centred cups rising therefrom are advantageously displayed. There on the high upland, exposed to every ray of light, the flowers were in their heyday of perfection. The shaggy fruits which had so attracted us at lower elevations had, as we rose, gradually given way at first to scantily-flowered stretches, with seed-heads mingling with them, then to colonies of flowering plants alone, till we arrived at the highest part of the grassy incline where, as will be

REMBRANDT GRAVURE



THE HEAD OF THE TURTMANNTAL

THE UNIVERSITY OF CHICAGO

The University of Chicago is a leading center of research and learning in the natural and social sciences, the arts, and the humanities. It is a place where the most brilliant minds from around the world come to study and work together. The university's commitment to excellence is reflected in its rigorous academic standards and its dedication to the pursuit of knowledge. The University of Chicago is a place where the past meets the future, and where the pursuit of knowledge is never-ending.

seen in the photograph on page 242, the whole place was swathed in masses of these choice flowers.

There has been a great deal of controversy of late as to whether this yellow Anemone is really a variety of *A. alpina*, or a distinct species. Certain it was that the pure sulphur-coloured form appeared rigidly associated with the granitic, or non-limey formations, while during the whole of our holiday in the Valais we did not see a single white *Anemone alpina*. Until one has seen them in the mountains, ranging in stature from the normal eighteen inches down to six inches near the snow-line, in such profusion as to resemble buttercups in our own fields, it is difficult to realize the immense number necessary to provide such a display. As with so many inhabitants of the stony alpsides, this plant is an extremely difficult one to remove in anything but the seedling stage, owing to the enormously long brown woody root, which dives and delves between the rocks, presumably in search of an equable state of moisture, and we did not trouble to disturb any of the plants, contenting ourselves with merely photographing them (see page 58); none too easy a task on account of the constant movement taking place among the tall flower-stems, due to the ever moving air currents. Up at those high elevations there is rarely a day which is positively windless, except perhaps near sunset and sunrise, when the light is too poor for photographic purposes. Doubtless many other photographers will bear me out when I say that

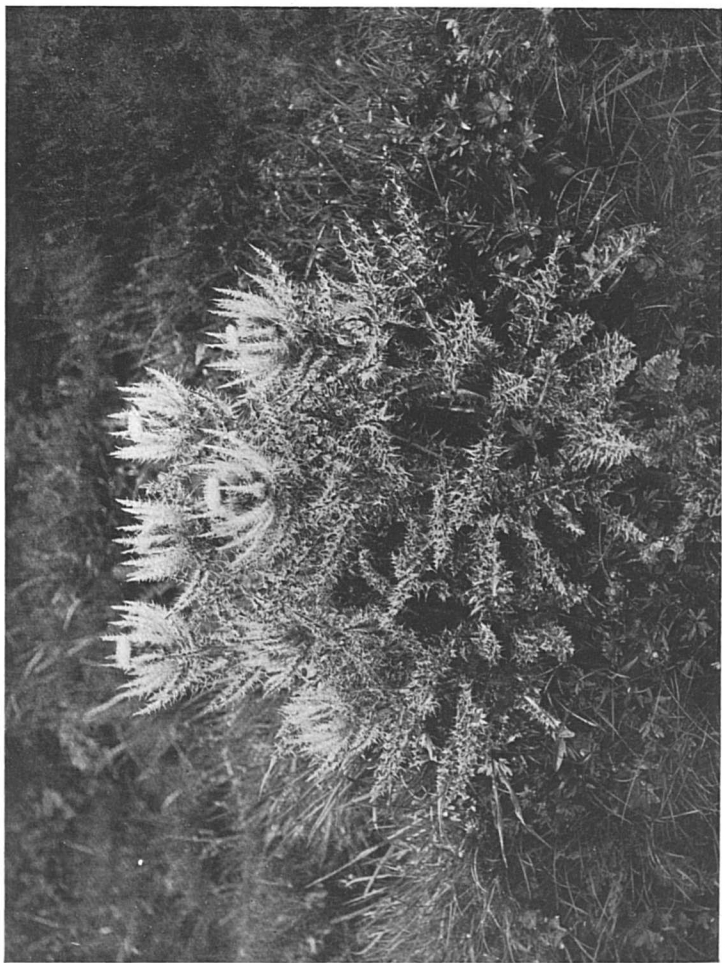
one does not always prefer days when light winds only are prevalent—not infrequently such winds, gentle as they may be, are very continuous, and no amount of patience can catch the flowers motionless, even for a few seconds; whereas it has frequently been my fortune to secure quite difficult exposures on gusty days, when by waiting—often for a considerable time—a really quiescent period has been taken advantage of.

Despite the amazing prodigality of the Anemones, they are interspersed in places with drifts of the lovely white, satin-like flowers of *Ranunculus pyrenaicus*, each with its cluster of rich yellow stamens centring the cup, while bright ruddy splashes, usually upon slight eminences on the irregular ground, denoted the clustered flowers of *Trifolium alpinum*. Ever since leaving the hotel, the bright blue flowers of *Myosotis alpestris* had been sprinkled over the grass, but when we had risen to the more open alpside, above the last of the wind-driven pine trees, these sweet little Forget-me-nots were much more evident, producing sheets of azure beneath the soft yellow of the windflowers.

Having passed to the southward of the Meidenhorn, the great conical mass of rock which gives its name to the district, we noticed, on tiny level lawns of closest turf, colonies of *Androsace obtusifolia*, whose slender stalks bearing heads of pure white primula-like flowers looked extremely dainty. Unlike many of its relatives in that it is practically devoid of the silky covering to its foliage which one has almost learned to look for



ANEMONE SULPHUREA ON THE MEIDEN-ALP.  
(See page 241.)



A HIGH ALPINE THISTLE (*CNICUS SPINOSISSIMUS*).



in this family, this androsace makes loose rosettes, about the size of a shilling, composed of rather spoon-shaped leaves, from which rise the three to four inch flower stalks. This plant, though so diminutive, appears to possess a robust constitution, and the great majority of those I sent home are now growing cheerfully in my garden and will, I hope, favour me with their flowers in the spring.

The attractiveness of the landscape hereabouts was greatly aided by enormous quantities of *Viola calcarata*, which stretched away over the stony hillside till the individual flowers were lost to sight in the blue haze they made, while beyond, rose the gaunt and naked sides of the Meidenhorn, rearing itself from the alp, like the horn of a rhinoceros. In more or less solitary groups, scattered over the inclined ground, usually on the top of some sudden rise, grew *Cnicus spinosissimus*, the ivory-tinted heads of flowers and spiny involucre looking extremely effective, as will be seen by the reproduction opposite. We had already found, at lower elevations, many of the previous year's yellow and discoloured seed pods lying on the grass, doubtless having shed their seeds on their rough journey down the alp-side during windy weather. I have no experience of this plant in the garden, but I should imagine it to be a deeper "rooter," and so most satisfactorily grown from seed sown *in situ*, or pricked out while in a very small state of its development. It should certainly make a

handsome subject some way from the eye, where the dwarfer alpine plants begin to merge into the small shrubs which add so great a charm to this form of garden decoration.

Having by this time traversed the greater part of the flower-strewn alpside intervening between the Blummattalp and the glacier, the ground began to assume a wilder appearance, the short grass giving place to sodden and mud-begrimed stretches of half-decayed vegetation (really the foliage of the previous season, still lying close to the plants which had borne it), from which the snow had only a day or two receded.

All over these stretches, wee green points of new life were showing, as the farina-covered buds of *Primula farinosa* poked their noses through mats of *Homogyne alpina* (just waking into life) and *Salix serpyllifolia*, whilst in other places, equally dank and sodden, where snow-water rilled over the ground, the daintily-fringed flowers of *Soldanella alpina* were beginning to unfurl their graceful bells. In the crevices of the boulders, which lay about in increasing profusion, grew *Primula hirsuta*, whose rosy flowers transformed the dull grey rocks into things of beauty, while at their base the shaggy *Anemone vernalis* was opening its beautiful cups.

On the steeply rising hillsides where the pine trees, hardy as they are, could no longer withstand the severe conditions existing at an altitude of 7,000 to 7,500 feet, their place was taken by the dwarf and



THE MOUNTAIN AVENS (*DRYAS OCTOPETALA*),  
(See page 250.)



THE PROSTRATE JUNIPER (*J. COMMUNIS* V. *PROSTRATA*).

prostrate-growing Juniper, *Juniperus communis*, var. *prostrata*, and in the vicinity of the "primula rocks" many fine examples of this beautiful conifer were noticed spreading quite horizontally over the alpside, or sweeping in graceful avalanches down some weather-beaten rocky face. Rarely exceeding nine inches in height, the branches are intensely tough and wiry, while the tiny leaves are so short and prickly, that where we had to force our way through this scrub, it proved extremely difficult and painful work. This decorative pine exhibits, in a striking degree, the way the alpine vegetation has, through long ages, and doubtless at an immense sacrifice of individual plants, become adapted to the conditions prevailing at high altitudes. The prostrate branches closely following the contour of the ground or stone over which they grow, offer the minimum of surface for the fierce gales to act upon, while the immensely heavy fall of snow during the winter is unable to greatly damage the tough growths, since very little pressure brings them to the support of the neighbouring surface over which they trail.

Deserting the flower-spangled alpside, we pushed on to the moraine near the foot of the Turtmann glacier—that vast accumulation of greyish rock, or rock-detritus which we had looked at from the Blummattalp, when the track, such as it was, entirely disappeared, and we were obliged to scramble as best we could over the uneven stones. Consisting of those

masses of rock which the irresistible action of the frost splits off from the exposed cliffs between which the ice-stream descends, and which fall on to the slow moving river of compacted snow, frequently being brought from immense distances to swell the vast ridges of detritus, not infrequently miles in length, which are commonly found at the termination of the glaciers—these sodden shingles, through which snow-water is constantly passing during the summer months, often in tumbling cascades, appear, when viewed from a distance, to be the essence of chaotic desolation. Nevertheless, it is equally characteristic, when plodding across their rugged surface, to come with the utmost suddenness upon glorious groups or patches of brilliantly coloured flowers. These stony wastes have, to a large extent, a flora of their own, where the (generally) deep rooting plants which flourish on their rocky bosoms can send, far into the crevices and among the finer fragments which accumulate in the interstices, their feeding fibres. In such a position—however fierce the sun—there is no possibility of the plants wanting for water, since nature automatically regulates the supply by the melting snow above. Thus the hotter the sun (so presumably the more suitable the conditions for rapid growth) the more freely does the snow thaw, sending crystal streams running in a thousand places among the shingles, while when the growth is checked by the falling of the temperature, the snow ceases to melt at so great a rate, and finally,

when the grip of winter holds the earth once more, the moisture gradually soaks away, and a thick blanket of dry snow settling upon the plants, tucks them up safely for their long and complete winter rest.

No external influences affect these hardy mountaineers when so protected, thus causing them to prepare, and reserve, all their energies till the sunshine of returning summer thaws their white quilt, when the refreshing streams again supply them, inducing a surprisingly rapid development, which speedily mantles the close tufts, or sweeping cascades of foliage, with the gorgeous blossoms which characterize many of these moraine plants.\*

After stumbling over the bare and rocky ground for some distance, a purplish crimson splash, one hundred yards long, introduced us to *Sax. oppositifolia*, falling from ledge to ledge in a glorious cascade, its undulating mat of dwarf green foliage being studded with myriads of flowers. While the small plantation of this "harbinger of spring" which I grow in my garden, delights me annually with a number of flowers in February or March, I have never imagined that it could be so decorative a subject when grown in a mass, and that brilliant display made me long for a larger garden—a disused stone quarry, for instance, where, by arranging a water-supply along the highest part of the rocks, I could repeat, on a slightly smaller scale, the lovely scene before me.

\* For detailed description of how I made my garden moraine see "The Story of my Rock Garden."

Both before and after passing the Saxifrage we crossed more stony waste without a sign of vegetation, until rounding a projecting shoulder a beautiful patch of close green foliage, decked with cream-coloured, eight-petalled flowers, announced *Dryas octopetala*. There, where its roots could descend into the moist stone rubble, and fully open to the sun from daylight to dark, the Mountain Avens made prostrate sheets of foliage, while the flowers were numerous and very large. Hitherto I have grown this *Dryas* in my garden, in a half shady position, and while it is not a too robust subject for a smoky locality, I have been fairly successful with it. From what I saw in the mountains I feel confident that an extremely gritty compost, well supplied with humus, kept copiously moist from March to August, in a position *fully* exposed to the sun, would induce a much larger proportion of flowers to mantle its dwarf-spreading branches than is the case with my plant at present.

The difficulty with so many alpine plants is that as soon as we give them, in our garden, the sunny position they require to fully develop and ripen their tissues, they lack water during the summer months—the sprinkling which is often given them, even by the aid of a hose, being wholly insufficient.

The more I see of the mountain plants in their rocky homes, the more definitely do I come to the conclusion that to have a really satisfactory garden, some method of *copiously soaking* the soil with fresh water at inter-



vals of, say a week, during the hot weather, must be devised.

While we were admiring the glories of this plant, the weather underwent a considerable change, a fine, mist-like rain beginning to fall, as though the grey clouds which had previously been curling above the valley, were getting lower, and, coming into contact with the cold material of the glacier, could no longer hold the particles of moisture, which their originally higher temperature had permitted them to do. However that may be, we were soon obliged to unroll our waterproofs and don them, and as I was desirous of making a negative of a portion of the patch of Dryas, I thought it best to get to work before the rain increased in volume. Ideal as are the conditions for the growth of many of the mountain plants, a moraine is not a pleasant place on which to rig up a camera, and what with the drizzle and my flapping mackintosh, coupled with the rough ground, I had a busy ten minutes getting the plant nicely centred on the focusing screen. Growing on a steep slope, which fell away in slippery shingles for 700 feet, it was not the most convenient of places upon which to secure a footing, especially when one's head was wrapped up in a cloth. However, by cautiously arranging the tripod legs in crevices between the larger stones, a sufficiently firm position was secured, and an exposure made, which, despite the fact that the light was by that time extremely poor, necessitating a prolonged exposure,

turned out successfully. The illustration on page 244 shows a portion of the plant nestling among the grey stones, while in the original print the glistening rain-drops are plainly visible.

Packing up our kit to prevent it getting unduly wet, we left the lovely *Dryas* undisturbed, knowing that it would be far too deeply rooted to be removable, even had we desired to do so. We trudged along, feeling very thankful that we had stoutly nailed boots to enable us to easily negotiate the stony waste. In all sorts of odd places, *Linaria alpina* grew in such close patches of flower as to appear devoid of leaves, while *Sax. aizoides* made rich green hummocks of foliage. Doubtless the many specimens of these two plants, which we had previously found growing along the Turtmannbach, had become distributed by means of the streams flowing from their higher and more natural habitat.

Some little distance from us, and in a particularly rough and desolate part of the moraine, amid huge lumps of stone flung about in all directions, we caught sight of a patch of rich yellow, and though the rain laden air prevented a clear view, we felt sure we had sighted the lovely *Geum reptans*. Hastening forward as rapidly as the weather, our well filled rucksacks, and the uneven ground, would permit, we came upon our prize, and found, much to our delight, that we had not been mistaken. There at our feet lay as fine a plant of the Creeping Avens as we could desire, throwing out on

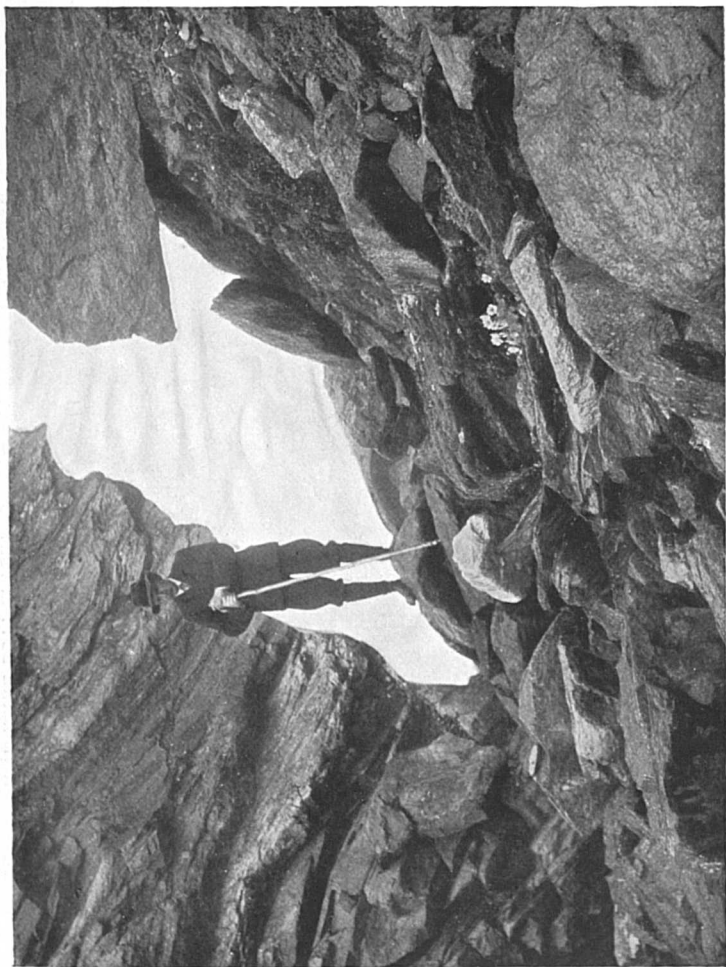
all sides its slender strawberry-like runners, each of them ready to make a new plant as soon as it had taken root among the rocky *débris*. This plant is much more handsome than its near relative, *Geum montanum* (which we noted on the alpside near to the hotel), and has deeply-incised leaves which are velvety rather than glistening, making a brilliant plant when seen amid its drear surroundings, usually with no sign of vegetation near it. After making photographs of the specimen, and also a more general view showing its habitat (see pages 239 and 252), we proceeded to prize and lever up the adjacent slabs and lumps of stone, so as to secure the plant.

It was a task! that *Geum* appeared to have no intention of coming up. Not only did its roots spread about in the most astonishing way, but if there happened to be at all within reach a stone larger than the others, and practically immovable, the roots seemed to make a "bee line" for it, and dive and delve below it. After almost breaking our alpenstocks, in the endeavour to use them as crow-bars, and gradually raising up even these large boulders, wedging small fragments of stone under them to prevent them slipping back again, we finally succeeded in dragging forth the plant fairly intact, and also a goodly number of rooted off-sets. These we carefully consigned to our 'sacks, and then looked to our wounds, which consisted chiefly of bruised knuckles and shins, due to falling pieces of rock during the encounter.

These little scratches, however, were more than compensated for by the fact that the Geum and its rooted runners now appear as happy in my wee moraine near London, as they were that wet afternoon within a few yards of the Turtmann glacier. At long intervals, as we wandered over the moraine, we came upon several such isolated clumps of *Geum reptans*, quite unconnected with one another.

Reaching the glacier itself, the rain which hitherto had been only drizzling floated down upon us in the form of snow, but thinking that it might give over, we plodded up the ice-slope, hoping to reach as far as the first ice-fall. Very interesting was the mighty river of congealed water, with its myriad cracks and crevices, while ever and anon the trembling or humming vibrations made by the sub-glacier streams could be both felt and heard.

The temperature which, on the alpside, had been delightful (if not, indeed, quite hot) had fallen very considerably, and not even the exertion of tramping over the rough inclined face of the glacier kept us warm, while, to make matters worse, the snow-fall materially increased. The probability of getting far on the glacier for that day appearing remote, we decided to return, especially as the hour was late, so after making one or two exposures (see page 256), which process, by the way, nearly froze us, we retraced our steps to the moraine, hoping to find a few more plants on our homeward journey.



THE HOME OF GEUM REPTANS.



A MORaine BUTTERWORT (*PINGUICULA LEPTOCERAS ALBA*).

(See page 255.)

Hardly had we set foot upon the rocks, when we came across some magnificent pieces of *Silene aculis*. *Silene aculis* in our gardens, where it grows in small tufts one inch thick, and sparingly flowered, and *Silene aculis* in its native habitat, are two widely different things, and well might one be pardoned for failing to recognise it, as it makes a splash of pink upon some stony knoll. Whether growing on the alpside or the moraine, it always seems to prefer some little rise in the ground—a protruding hummock which drops rather suddenly to the turf below, or an accumulation of stone detritus in form roughly that of a buttress—and there on the steep face, and therefore more or less vertical, does the *Silene* nestle into a tight, hard cushion, resembling a piece of green coral rather than a plant.

When with force we part the hummock, it is frequently found to be four or five inches thick,—covering the irregular surface with a wonderful undulating carpet of rich green—which in summer is studded with small sessile pink flowers to such an extent that the foliage is frequently obliterated, and only pink cushions decorate the rocks. Such were the patches of colour which greeted us on the Turtmann Moraine, contrasting strangely with the wilderness of stone fragments which lay scattered in giant heaps all around. Needless to say, this plant made another subject for the camera, and the illustration on page 300 represents the beautiful way in which every crevice

is filled with the ever-spreading cushion of the *Silene*, as year by year it widens into a larger and still larger green mantle, tightly hugging the rocks, yet always growing from the one central taproot of great extent.

Very little experience with this plant illustrates the futility of removing a tuft of any size, so that the hummock in question still adorns the moraine, unless some inexperienced collector has since been unwise enough to destroy it. In scattered positions and in very loose grit we found several small specimens, which were comparatively easily removed, though from my experience an equally good way to secure plants for the garden, is to tear up a tuft into small pieces—each consisting merely of two or three growths—inserting deeply and firmly into very sandy soil, and keeping “close” for some weeks, when a fair proportion of them will be found to have rooted. Subsequently they thrive in the moraine, especially near some protruding stone over which they can spread, though they never make such glorious patches—neither do they flower so generously—as in the mountains.

Where little runlets of water leaped down among the rocks, the quaint little yellowish or dirty-white flowers of *Sax. planifolius*, rising from their somewhat Androsace-like rosette of leaves, twinkled at us, while on the upper side of large blocks of stone, apparently living on nothing but wind-blown detritus, arrested by some roughness of the stone itself, *Sax.*



*bryoides* was brilliant. Just where the moraine merged into the alp, on some stones thickly covered with moss, which overhung a small waterfall, I was fortunate enough to come upon a lovely colony of the rare white form of *Pinguicula leptoceras*, the curious yellow mark on the lip (in shape not unlike a single flower of *Dicentra spectabilis*.) showing up strongly. The illustration on page 253, from a photograph I made of the group, shows this well. As is nearly always the case near running or falling water, there was a strong draught of air, which made all the little flowers sway on their slender erect stalks, causing me much inconvenience, and only a long wait secured a satisfactory exposure.

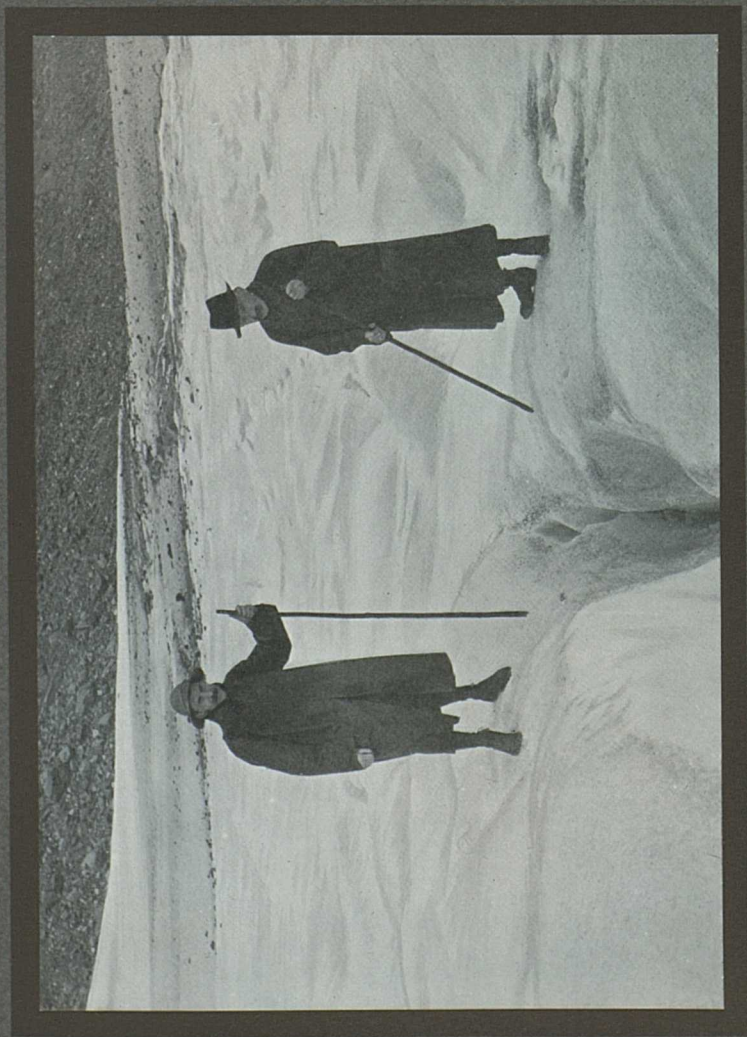
In the tiny stream itself, large green hummocks of *Sax. rivularis*, and the rarer *S. biflora* jostled one another, while on adjacent rocks, out of reach of the water itself, *S. aspera* spread its diminutive growths.

By this time, the weather not having improved, our collecting sack being full, and a goodly number of plates exposed, we set out for "home," resolutely turning our eyes away from the lavish display of treasures on either hand, all asking to be collected.

The rich pastures through which we had walked on a previous occasion were now sodden, and great banks of vapour drifted about, often hiding the track a few yards ahead of us, and then, of a sudden, parting as though torn by some unseen hand, giving us a peep down the valley, where in the far distance a white

speck stood out against the dark pine trees, which we recognised as the Hotel Schwarzhorn. In another hour we were close to it, and though wet and tired, we agreed that we had had a glorious day, one of many which we spent in that secluded valley.

Our last glimpse, as we turned into the hotel, was of a dull grey pall hanging over the ground, rent here and there, and disclosing faint suggestions of the mountains and glacier, while the air was thick with a Scotch mist, rendering the prospect of a good meal and a warm salon for the rest of the evening, extremely enticing.



A GOLD DAY ON THE TURTMANN GLACIER.  
(SEE PAGE 262.)



## CHAPTER XIX

### SCHWARZHORN HOTEL TO ZERMATT

As the foregoing chapters will have indicated, the weather, though uncertain, had been sufficiently good to enable us to fairly thoroughly explore the neighbourhood on either side of the valley at Gruben Meiden, so after a week in that little frequented place, so rich in floral treasures, we decided to shift our "camp" to the neighbouring valley.

We had heard so much of the magnificent scenery about Zermatt, that we were most anxious to go there, especially as we were already so near—though we were not sure as to its richness from a plant point of view, and as our holiday was drawing to a close we should have little time to hunt the district thoroughly, having to confine ourselves to one or two excursions, and these chiefly along the usual tourist track, which is generally well cleared of all its treasures.

We learnt from our host at the hotel, that he had once found, near to the summit of the Augstbord Pass, and on its eastern side, a pure *white* form of the lovely *Gentian bavarica*, whose typical blue flowers spangled the turf in such quantities. When we arranged to move on to Zermatt, he very kindly

offered to convoy us over a portion of the way, so as to lead us to this rare plant. It is hardly necessary to say how anxious we were to find this treasure, and it was with very considerable interest in the morrow's tramp, that we packed up our kit one evening and posted the heaviest portion of it to Geneva, there to await our arrival, arranging to take with us only bare necessities in addition to the rucksack and camera. We found from our maps that our best way would be, after crossing the Pass, to bear well to the right for some three miles, when we should round a shoulder, and if fortunate, strike the long and tedious zig-zag which would take us to St. Niklaus, where we could pick up the railway which runs to Zermatt. As the tramp would be a long one, and much exposed to the sun, we proposed to make a very early start. Accordingly, at 4 a.m. the following day, seemingly but a few minutes after we had dropped off to sleep, a knocking on our door acquainted us with the fact that it was time to be moving, if Zermatt was to be reached in comfort.

The morning proved gloriously fine, though extremely cold, and after a substantial breakfast, we walked up the slope rising from the hotel. We were surprised to notice that everything was thickly encrusted with hoar frost. The plants growing on the turf were all decorated with fringes of frost crystals, which glistened and sparkled in the early morning sunshine, while the frozen vegetation crunched under our feet as we moved away over the viola-spangled grass. The

pine trees, usually a dark feature in the landscape, were gracefully enamelled with a silvery sheen, where the moisture had congealed on their sharp, needle-like leaves. The whole effect was beautiful in the extreme, and occurring as it did on July 5th, it struck me as most curious, though it probably takes place frequently in the mountains, but as the first touch of warmth soon dissipates the crystal tracery, one has to rise early to see it.

Tramping steadily up the steep-sided Grubenalp, the track wound between close thickets of *Rhododendron ferrugineum*, gay with their rosy flowers, while the yellowish orange stars of *Arnica montana* glowed at us as we passed them, just unfolding their petals, which, during the night, had been protecting the vital portions of the flowers. Allied to the Groundsel, this is a very attractive plant for the Alpine garden, especially if grown in conjunction with *Myosotis alpestris*, with whose flowers it makes a delightful contrast. It is said to appreciate deep peaty soil, though for some unaccountable reason it has failed to make itself at home in my garden yet! I fancy it resents being transplanted, which may account for my want of success.

When well past the second Grubenalp, we came upon considerable patches of level ground of a boggy nature, almost covered with ice, sufficiently thick to prevent us sinking into the wet soil, and it was curious to note in the higher portions of this irregular ground,

within three inches of the water, plants of *Soldanella alpina* shaking their fringed bells in the morning air, rising through a crust of ice or thick hoar frost.

Where the sodden portion merged into a shingle slope, we noticed many fine pieces of the dwarf willow, *Salix reticulata*, throwing out its wee trailing branches from which grew the prettily marked leaves of deep green, tinged with bronze. Although such a tiny shrub, the roots wandered away to a considerable distance, and did not seem to appreciate being disturbed, most of my collected plants having succumbed.

As before, when near the pass, we saw quantities of the pink flowers of *Androsace glacialis*, and when we tried to remove some of them from among the smaller debris, we found the ground, to a depth of two-and-a-half inches, was frozen solid. Evidently early rising has its disadvantages from the collector's point of view!

The morning was exceptionally fine, and from the home of the *Androsace*, at an altitude of 9,000 feet, we secured beautiful views of the surrounding mountains, causing us to anticipate a glorious panorama from the summit of the pass, which we were rapidly approaching; it will be remembered the weather conditions on our previous visit had prevented us enjoying this advantage.

When nearing the top of the last rock-fall, splashed and streaked with the bright flower-mantled cascades of *Sax. oppositifolia*, I noticed, among the large quantities of *Ran. glacialis* which were strewn over the







RARE CREAM FORM OF THE GLACIAL BUTTERCUP (*RANUNCULUS GLACIALIS*).

shingles, a few plants which were particularly well flowered, and on going over to them discovered, much to my delight, a beautiful *cream-coloured* form. Although the type has usually snow-white petals, pink or rosy on the reverse, these were wholly of a delicate cream, while as in the case of most of the plants on that last scree, the leaves were heavily covered with fur, as though trying to imitate an *Androsace*, or even *Eritrichium* itself.

While we had promised ourselves that we would do no photographing until the pass was reached, I felt obliged to break this resolution in favour of so choice a "find," and the illustration opposite is, I think, a most satisfactory portrait of this charming variety of the *Ranunculus*, showing to great advantages its large and delicately modelled flowers, centred by a cluster of yellow stamens, while below are clearly visible the extraordinarily shaggy leaves. While the wind was only a light one, it was quite sufficient, on that exposed ridge, to cause the flowers to "shiver" at frequent intervals, and a careful adjustment of the wind screen was necessary to avoid movement appearing in the subsequent negative. As the plant was growing merely in a collection of small grit, sandwiched between large pieces of stone, it was an extremely difficult matter to coax the legs of my wind screen into the ground, and proved a severe test for the umbrella ribs which I had used for this purpose. However, after this and many other rough experiences, they were, on my return, as

undamaged as when I started. Reverently depositing this glacier buttercup in the rucksack, after having levered it out of the frozen ground with out alpenstocks, we completed the ascent to the cairn of stones which marked the summit, when such a glorious panorama greeted us as we breasted the last few feet that it almost took our breath away.

During the previous half-hour we had been out of sight of the sun altogether—the enormous mass of the Steinhorn intercepting its rays,—but when we reached the cairn we were nearly blinded by the intensity of the light beating fiercely upon the snow and rocks all around us. The snow, which on the western slope had been hard frozen, was quite soft on the eastern side, and in those places where it had vanished the ground was soft and sloppy; while the air temperature, which hitherto had resembled a crisp January day, struck upon our faces with all the softness of June.

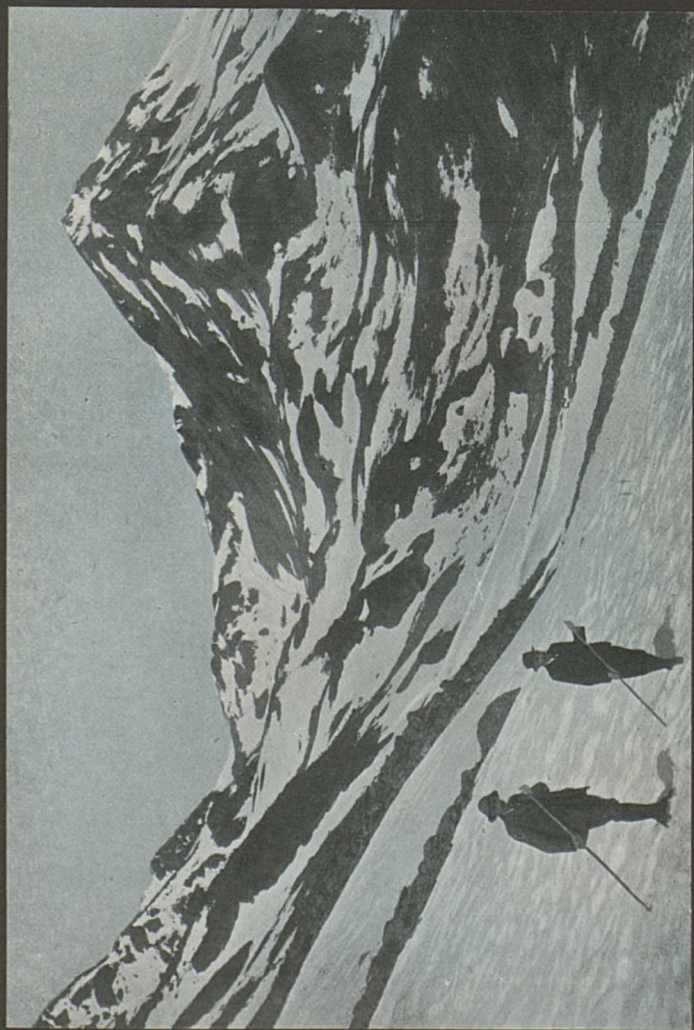
It was by that time eight o'clock; we had risen over 3,000 feet since we started (a very creditable performance, seeing that we had been collecting, and in one case photographing, *en route*), and felt quite ready for a second breakfast, so each selecting a slab of stone as a seat, we made ourselves comfortable in the warm sunshine, and proceeded to lighten our rucksack to a considerable degree. While thus engaged, having previously rigged up the camera and focussed it, our guide made an exposure upon us, and the reproduction on page 268 portrays my companion and myself

enjoying our *al-fresco* meal. The photograph also indicates the appearance of the top of the Pass, with the snow sloping away on each side of the stony ridge, which had been the first to throw off its white mantle. It was upon the rocky ground to the top right hand side of the picture (and of course much higher also) that the Purple Saxifrage made such a beautiful display. In the original photograph it is possible to distinguish, among the shingles close to which we are seated, numerous clusters of the Glacial Buttercup, as well as a few small pieces of *Androsace glacialis*.

As we rested there, we overlooked the steep escarpment, mostly snow-covered, which drops away to the deep-sunk Zermatt valley. Down to the left of this depression wound the track leading *via* the Augstbord valley to Stalden, while to the right, crossing steeply-inclined snow slopes, was the path we proposed following. Although the greater part of the valley of Zermatt was hidden far below our view, its eastern wall rose up on the further side, softened by the intervening space, while away on the horizon soared the Simplon group of mountains, sparkling in the sunlight. The extreme beauty of the scene, especially the soft gradations upon the snow, can perhaps be realized by reference to the reproduction on page 264. Looking to the westward, the whole range, of which the Meiden Pass is the centre, was spread out crisply before us, every feature of the hills rising from "our valley," as we called it, standing out in bold relief. Stretching

away from where we sat was the last steep incline, formed of tumbled rocks, then the more level expanse of snow over which we had tramped an hour previously, streaked with cold, blue-grey shadows, cast by the adjacent higher ground. At the further limit of this white field, where the Grubenalp dipped suddenly towards the Turtmannbach, the more distant tree-clad wall of our valley rose up, lined here and there by silvery threads, which we recognised as snow-rills, crossed by us on many previous occasions. High above these wooded slopes, the snowfields of the Meiden Pass were bathed in sunlight, backed by the dark-coloured line of rocks forming the *arête*, below which the track winds towards St. Luc. In the extreme distance, some miles beyond the Meiden Pass, and just tinted with a beautiful rosy glow, glimmered the snowy summit of the Bella Tola.

It was with a sense of keen regret that we took our last impression of this glorious district, which had provided us with so many pleasurable days, hunting over its flower-spangled alps or plant-encrusted rocks. Shouldering our kit, and resolutely turning towards the east, we began to traverse the snow-covered slopes which intervened between the pass and a dark rocky shoulder, some miles away to the right. It was near to this track that we hoped to find the White Gentian, for which purpose our guide had so kindly accompanied us, and our hearts beat high with expectation as we trudged along the narrow foot-way, merely a faint trail leading like a groove across the snow incline



COMING DOWN FROM THE AUGSTBORD PASS.





When nearing the position indicated by our conductor as the spot in which he had found *Gentiana bavarica alba*, our spirits sank to zero as we noticed that the whole place was still covered deeply with snow. Despite our most careful search, in the hope of finding a place from which the wintry covering had disappeared, our labours proved futile, not a glimpse of the soil could be obtained, while the snow appeared to be still several feet in thickness ; even had we scraped it away, the plants would have been resting, and probably all but invisible, supposing we had been fortunate enough to strike the exact spot, a highly improbable supposition on an open alp where our guide had casually noticed the tiny plant twelve months before !

However, as there was no choice, we were obliged to make the best of it, but before saying good-bye to our companion, we asked him to expose another plate, showing the district over which we had tramped since leaving the pass, and the illustration on page 264 shows us on the snow slope, with the few dark ridges of rock detritus lying gaunt and drear, just as they had come hurtling down the incline, after having been shattered from the Steintalhorn (rising on the left hand) by the mighty action of the frost. To the right of the picture the dark Schwarzhorn reared its rocky cone high above us, illustrating how much longer the snow remains on its eastern and northern sides, where, shielded from the fiercest of the sun's rays, the snow patches still lay clean and white, glistening in the pure

atmosphere of the mountains. The saddle-shaped depression seen silhouetted against the sky to the left of the photograph is the snow-patch by the pass, near which we had breakfasted, while in the hollow far below us ran the track leading to Stalden.

Resuming our tramp we, in due course, rounded the dark shoulder which we had seen in the distance, and there the scene again changed: the Zermatt valley lay slumbering at our feet, a deep tree-clad rift in the giant mountains rising on either side. To our right hand, the snowy summit of the Weisshorn flashed and gleamed in the sunshine, dazzling us with its brilliance. We seemed to be quite close to this magnificent mountain, whose north-western face we had so frequently seen rising above the eastern side of the Turtmann glacier. It was even more beautiful from this point of view, illuminated by the radiance of the morning light, and backed by the intense blue of the sky. On the opposite side of the precipitous valley, the mountains about Saas soared skywards, while as our eyes wandered gradually to the south, the glistening Dom and the Täschhorn (respectively 14,940 feet and 14,757 feet above sea level) came into view, the panorama being completed by the majestic rounded summit of Monte Rosa, and the neighbouring Lyskamm, both looking like giant billows of snow in the far distance.

To the north, the enormous ice-stream of the Aletsch glacier (the largest in the Alps, extending over a distance of thirteen miles) stretched in a sinuous

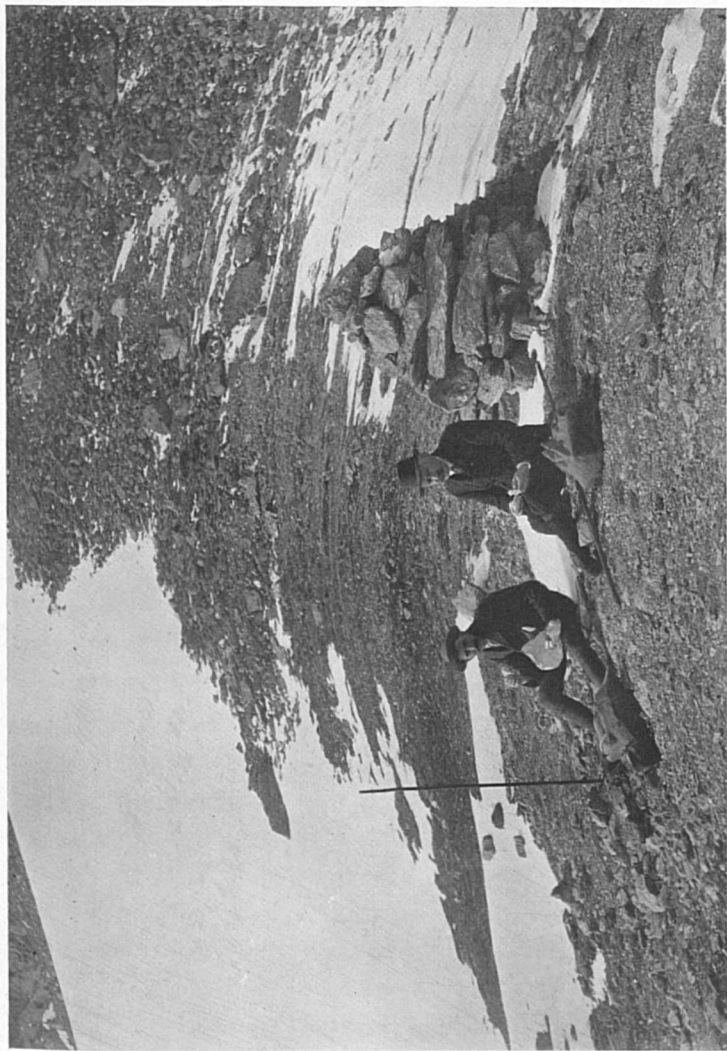
crumpled line, reflecting from the myriad facets of its fissured surface the sunshine which was striking brilliantly upon it.

The slopes near to the track, which for some time past had been generously dotted over with the glorious sapphire splendours of *Gentiana bavarica*, now offered us in the more turfy places the large indigo trumpets of *Gentiana acaulis*. This old "gentianella" of our gardens was in much better form on the Zermatt side of the Schwarzhorn ridge than it had been in the Turtmannthal; in the latter place the flowers were of a very sombre tone, with a considerable admixture of green in their colouring, detracting much from their beauty.

After some little trouble we "picked up" the trail leading to the long zig-zag shown on our map, and before long we were hammering our way over the stony surface. When within the thin fir belt once more, the rich, golden yellow flowers of *Senecio Doronicum* made a most effective display, rising twelve or fifteen inches from the ground, on slender stalks, clothed with a fine hairy covering. The leaves, of a rather large and loose character, were of a blue-grey colour, heavily felted with down on their under sides. As a rule the plants grew singly, or at most in groups of two or three, lifting themselves well above the surrounding vegetation. So charming did they look that I essayed to photograph them, an extremely difficult matter, owing to the rich colouring of the flowers. By employing

my twelve-times light filter, I managed to secure a very fair monochrome rendering of the blossoms, and silver-grey foliage, but unfortunately the long exposure necessitated by the filter, caused some of the flowers to be slightly out of focus, due to movement, despite the elaborate precautions taken to screen them. There appear to be a number of different forms of this plant, so that frequently when grown in our gardens it is far from being as attractive as when seen in the mountains, or is it the variation due to the different environment—particularly the more subdued light and winter wet which prevails in England? In many places, on the rough, stony hill-sides, we saw beautiful crimson mats of *Saponaria ocymoides*, much more brilliant and far neater in habit than I have ever seen in England, while on some rocky cliffs, exposed to the sun the whole day, I noticed vast collections of the “cobweb” Houseleek, like downy hummocks of whitest wool, many of them surmounted by their vividly red flowers. The contrast between the webbed rosette and these brilliant glowing stars was most effective.

The continuous down-hill “going” over the uneven stony zig-zag was extremely tiring, especially as at every jolting step the rucksacks thumped our backs unmercifully. Including a thirty minutes’ rest for lunch, beside a sparkling rill of delicious water, it took us over three hours to traverse this portion of our journey, and when we eventually entered St. Niklaus, we were terribly hot and tired. After a refreshing meal,



BREAKFAST AT SUMMIT OF AUGSTBORD PASS.  
(See page 262.)



enjoyed under the shady verandah of one of the many cafés, we sauntered through the quaint village, much of which is extremely picturesque. The church, surmounted by its golden minaret, is very happily situated, and contrasts pleasingly with the wooden châlets which comprise much of the place.

Having made a few photographs showing some of these features and the beautiful mountain setting which St. Niklaus enjoys, we made our way to the station to await the five o'clock train to Zermatt. It was these St. Niklaus exposures which, upon development, proved to be the same plates as had previously been used for the *Anthericum liliastrum*, that windy morning on the Meidenalp. Those of my readers who are also photographers will understand the pleasing sensations which thrilled me as the developer ruthlessly brought to light such oversights, and while economy is doubtless a virtue very excellent in its way, there are distinct disadvantages in combining a group of white lilies with a scene depicting a Swiss village, through the centre of which rises a daintily proportioned church spire.

The train journey to Zermatt is extremely interesting, and passes through beautiful scenery. Traversing in several places the rack and pinion system, the lines cross and recross the swift flowing river Visp, which is augmented by several beautiful waterfalls, leaping in silvery ribbons down the rocky walls of the narrow valley. High up on the left, after passing the châlets

of Breitenmatt, glistened the Festi glacier, descending from the Dom, while to the right the ice-stream forming the Bies glacier, shed by the Weisshorn, lay cold and grey in the shadowy side of the valley. As we passed it, I noticed a vast quantity of ice and snow come pouring down its rugged surface in an enormous avalanche, appearing to move so slowly, that it was difficult to realize it was sweeping down from point to point of the crumpled course of the glacier with lightning-like speed, accompanied by a deafening roar as the huge masses of ice were shattered by the impact.

At the little village of Zermattje the line crosses the Visp for the last time, and ascending another steep gradient, rises high above the river which foams and thunders in its narrow ravine below. After traversing a narrow gorge, which with difficulty accommodates both rail and road, we again emerged into a more open place, when suddenly the stupendous Matterhorn came into view, towering high over the village of Zermatt, its sharp pyramidal form, distinguishing it at a glance from any other mountain we had seen. Although I had examined many photographs of this famous mountain, the vastness of its bulk came to me as an immense surprise, as, leaning from the observation car, I feasted my eyes upon this monarch of the Alps.

Feeling thoroughly tired out after our exertions, we went straight to our hotel, and over dinner and a subsequent pipe discussed our plans for the following few days. If the weather continued fine, which it had



*SCNWARZHORN HOTEL TO ZERMATT 271*

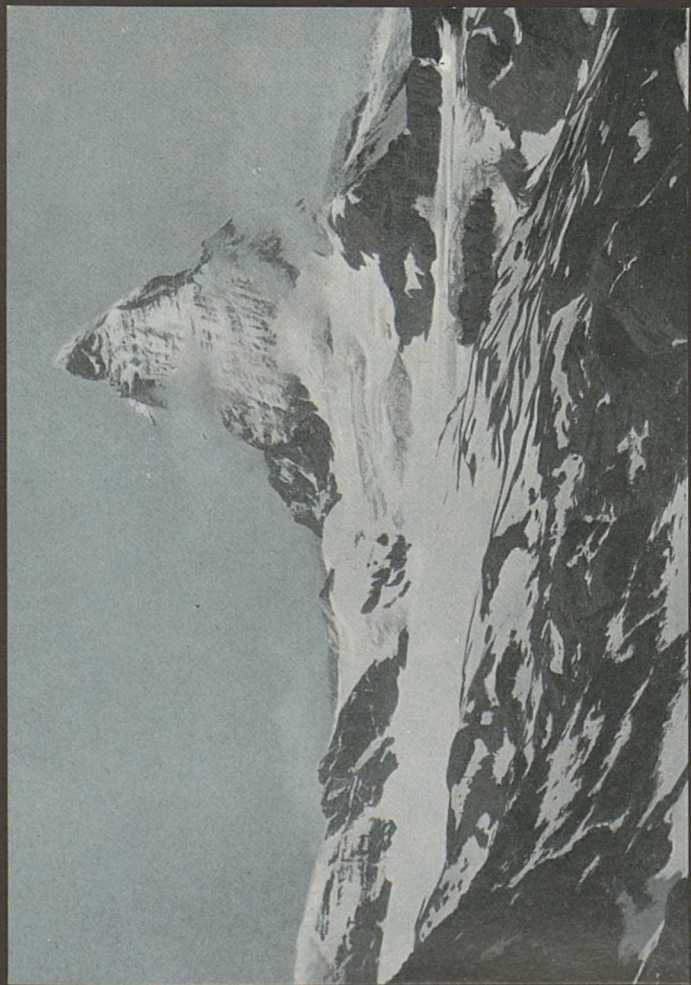
every appearance of doing, we proposed to go, on the first opportunity, to the Gorner Grat, so as to enjoy the famous panorama which is said to be unrivalled in Europe, and on subsequent days to ramble towards the Schwarzsee (by which route the ascent of the Matterhorn is made) and explore the older parts of Zermatt and the rocky and meadow-land adjoining.

With our programme thus mapped out, we retired to rest, and slept as soundly as the proverbial church.

## CHAPTER XX

### ZERMATT—TRAMP TOWARDS THE SCHWARZSEE

THE following morning when I awoke, the first sound to greet my ears was the dismal drip, drip of water, as a thick fine rain descended from heavy banks of vapour, lying like a fog, a few hundred feet above the valley, obliterating the mountains on every side. The lime tree close to my window was heavy and drooping with moisture, and it was the fine particles of water accumulating on the leaves and running off in large drops from their tips, which had called my attention to the change in the weather, upon the uniform character of which we had based our plans the night before. A visit to the Gorner Grat was evidently out of the question, as, had we been able to reach that distant 'vantage point, we should have been drenched in the process. So, after breakfast, we donned our water-proofs, and sallied forth to explore the village. Unfortunately Zermatt itself is spoilt by the presence of a number of modern and palatial hotels, quite out of keeping with the scenery and native architecture, though doubtless extremely comfortable to live in. No matter where we went, the jarring note of some blatant, white-fronted, many-storied building would



THE COLD GRIM PEAK OF THE MATTERHORN RISING ABOVE  
THE SILENT SNOW-FIELDS.



break the harmony of the picturesque wooden *châlets*, which decorated many quaint corners of the village.

One particularly characteristic feature of the old part of Zermatt was the number of curious wooden buildings, standing on legs some two feet to three feet six inches from the ground ; at first sight they suggested store places for grain, protected from rats in much the same way as are our English corn stacks. I was interested to learn, however, that they are especially built for the preservation of the hay crop, which is none too large in the Valais, so that care has to be taken to prevent it being damaged by the heavy snow-fall occurring during the winter months, and which, in the course of melting in the spring, would render it to a large extent valueless. The buildings, known by the name of *Mazots*, are built of larch wood, and usually assume a rich, bronzy red colour as they age.

Zermatt lies in a green and fertile valley, with pine-clad slopes bounding it on the east and west. To the south rises the snowy *Théodule Glacier*, buttressed on the left by the *Breithorn*, while to the right the *Matterhorn's* rocky pinnacle towers high over the *Hörnli* ridge.

Ascending the hills to the west of the village, the weather having to some extent improved (sufficient to allow a few weak sun gleams to penetrate the clouds which still veiled the mountains), we came upon sheets of *Campanula rhomboidalis*, whose bold, richly-

coloured flowers, depending from stout stalks, made blue stretches above the damp grass. On rocky outcrops, which in fine weather must have been extremely arid places, the red flowers of *Dianthus Carthusianorum*, in close packed heads upon tall stalks, made a brilliant display, while near by, and in the same exposed position, the delicate rosy stars of *D. sylvestris* grew in tufts from the stony crevices. Why this should have been christened the Wood Pink when it seems to appreciate an intensely hot sunny ledge is a mystery. In our alpine garden it is one of the many pinks which are liable to "go off" without any apparent cause, and if grown in partial shade, as is usually recommended this "miffiness" may be due to its position. When thriving, it makes an attractive feature in the rock garden in summer time, the flattish tuft of narrow grass-like foliage surmounted by a number of clear pink flowers. It readily germinates from seed, though like most of the *Dianthus* family it frequently hybridizes with other members of the same genus.

All along the fully exposed slope, were tangles of the pretty rose, *Rosa alpina*, rarely more than two feet six inches high, one mass of flower, pink to rich rose in colour. This dwarf rose takes kindly to garden treatment, and if wedged into some rock cranny, from which its somewhat pendulous growth may emerge, not only are its flowers extremely dainty, but the succeeding richly coloured fruits, like miniature apples, remain to grace the branches far into the autumn. A still



SAXIFRAGA AIZOON.  
(See page 274.)





more decorative plant is *Rosa alpina*, var. *pyrenaica*, whose berries are long and pear-shaped, both it and the type coming readily from seed, sown as soon as ripe.

Upon spongy places, where water was oozing in considerable quantities through the dark-coloured peaty soil, the white nodding tufts of the cotton grass swayed upon their slender stalks, whilst between them were the delicately scented flowers of *Habenaria conopsea*. High up in rocky clefts, *Campanula spicata*, a biennial, was throwing up its robust stem, and displaying its violet buds, shortly to open in the hot July sunshine.

The rain having by this time quite ceased, and the weather displaying an inclination to improve, we hastened back to lunch, with the intention of taking the camera with us on a ramble towards the Schwarzsee. Following the main track to the south of Zermatt we accompanied the rippling waters of the Visp for some little distance, and then turned off to the right, where the path meandered through meadows gay with *Camp. rotundifolia*. Soon we came to a rough plank bridge, crossing a noisy stream seething between rough blocks of stone which hindered its passage, and on the steeply inclined grass land rising from this was a colony of the bright yellow mullein, *Verbascum Thapsiforme*. The position these plants occupied, each growing by itself, and rearing its many-branched candelabra-like inflorescence some five feet from the turf, backed by the still higher ground, was extremely picturesque, and I

unhitched my camera sack and made a negative of them—again using the deep light filter. The result was eminently satisfactory, and in the subsequent print the mulleins strongly resemble birds of the flamingo type stalking through the grass, or looking up at the camera.

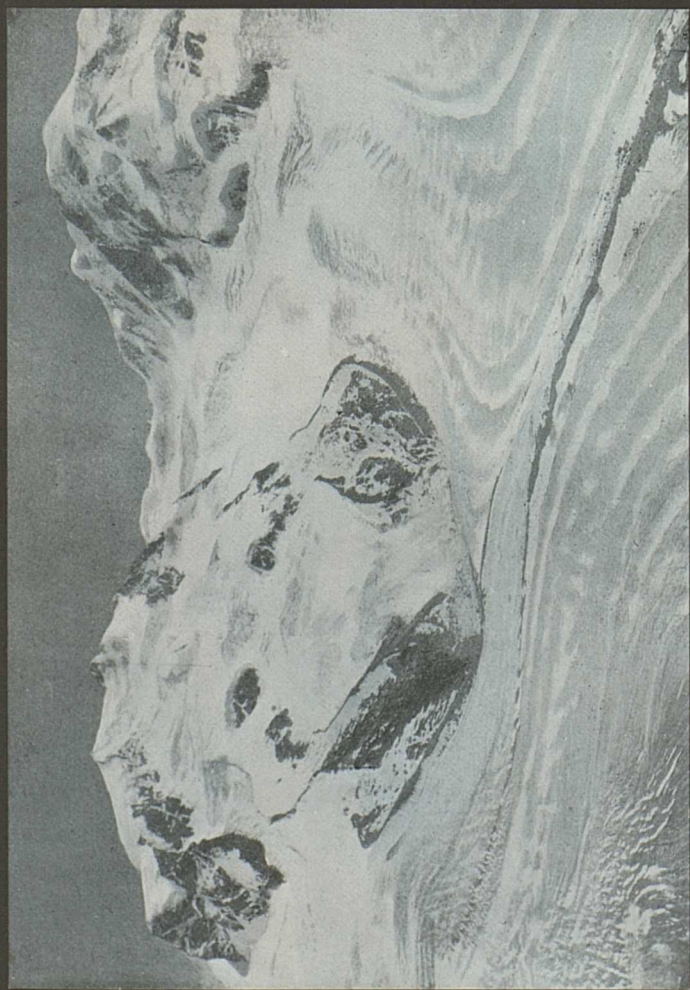
Proceeding along the zig-zag bridle-path amid spruce and stone pines, we frequently obtained beautiful glimpses across the intervening hills to the great Zmutt glacier. On leaving this wood, we turned sharply to the left, along the route leading to the Théodule Pass, which traverses the eastern side of the Hörnli ridge upon which is situated the Schwarzsee Hotel. All along this track, just wide enough for a mule, with steeply inclined turfy ground above and below it, were myriads of flowers. Close to the pine trees we saw vast stretches, gay with the golden stars of *Senecio Doronicum*; then as we rose the whole bank above us was mantled with thousands upon thousands of creamy flowers rising but an inch or so above the prostrate avalanches of *Dryas octopetala*. In many cases the ground between the patches of *Dryas* was composed of a lawn of the Bird's-eye Primrose—their tiny pink flowers just past their full beauty; *Soldanella alpina*, fast maturing its seed, and countless hosts of *Pinguiculas* adding their violet coloured flowers to the joyous company. Splashes of lemon-yellow here and there, denoted groups of *Erysimum helveticum* (a close relative of the wallflower) of a much purer colour, owing to the gloriously sunny position, than it ever

rejoices us with in the garden at home. Several of these plants which were growing at the edge of the track had formed dense cushions of growth literally covered with flowers, reminding us of dwarf hummocks of *Erysimum rupestre*—and upon examination it appeared that they had been injured during some previous season—subsequently breaking out into numerous stubbly growths close to the ground. Since this plant frequently inclines to gawkiness in the garden, this may indicate a method of treating it, so as to induce a more compact habit.

On the larger rocks which protruded from the ground, almost every niche and cranny formed a home for the silvery rosettes of *Sax. aizoon*, whose clustered leaves, bordered with brilliantly white lime scales, were flaunting their flower-spikes, doubtless in the hope of attracting the gaily-coloured butterflies which flitted about in great numbers. One very interesting feature in connection with this plant was, that, whereas the flowers are usually of a greenish-white colour, nearly all we came upon on this alp were of a soft though definite cream tint. So attractive were these graceful sprays of flowers, thrown upwards and outwards from the colony of comparatively small rosettes which produced them, that I made a photograph of one example, and the illustration on page 274 shows the plants nestling in a roughness of the rocks, while the flowers are backed by the more sombre tones given by some dwarf scrubby bushes behind.

At the foot of the incline, across whose upper part we were tramping, the river Visp disappeared under the snout of the mighty Gorner Glacier. This vast ice stream stretched along the valley at our feet for about a mile, and then turned eastwards, rising at an acute angle. The whole of its surface at this lower end was black with the detritus which had fallen from the rocky heights between which it passes, accumulating during its gradual progression from the Monte Rosa, Lyskamm, and Breithorn, which give it birth. Except for the grimy appearance, the view of it was superb, as it plunged between the mighty rock buttresses to the lower level of the Zermatt valley, exhibiting to our gaze its cracked and fissured surface, caused by the folding which necessarily takes place when the ice is forced over serious inequalities of the ground! Beyond the glacier, and slightly to the left, rose the ramparts of the Riffelalp, backed by the still higher Riffelberg, which elevated bluff (8,400 feet) hid from our view the Gorner Grat. Turning towards the north we enfiladed the Zermatt valley, and there, seemingly but a short distance away, lay the village (or perhaps in courtesy to the palatial hotels, I ought to say town), nestled at the base of the tree-clad slopes which rose on each side of and beyond it.

On many of the rocks bordering the path—doubtless flung down when the spring sunshine thawed the ice which had severed them from the parent cliffs above us—grew the dwarf *Artemisia lanata*, its silvery leaves



MONTE ROSA AND THE LYSKAMM.



contrasting conspicuously with the brownish colour of the stones. In wee crevices in these and larger rocks, rising from the alp, the green Spleenwort (*Asplenium viride*) nestled. This point, 8,000 feet above sea level, was the highest station at which we found it. A little way below the groove-like track, we saw delicate gauzy tufts of *Gypsophila prostrata*, one mass of pink (or white) flowers, entirely hiding the scant foliage. While this is a rapid grower in England, forming trailing mats of glaucous succulent-looking leaves, there, it was refined beyond belief, and showed no tendency to wander from a somewhat globular hummock, composed of fine thread-like stalks. So dainty a subject I could not resist, and though the position was a treacherous one (having to descend and then "rig-up," on a steep slope of uncertain nature, where a slip would probably terminate 800 feet below upon the rubbish-covered glacier), I managed with extreme caution to secure a particularly satisfactory negative. Wishing to collect some of these plants, hoping their refined character would be retained in my garden, I essayed to dig up some of the smallest, but in that case the apparently simple task obliged me to acknowledge defeat, for, after excavating, with much difficulty, to a depth of fifteen inches, the whip-lash-like root showed not the slightest intention of terminating, or of throwing out a single fibre. Knowing from previous experience how hopeless it was to remove a plant with that sort of root system, at least

with the tools at my command, I gave up the attempt, and promised myself that I would raise some *Gyp. prostrata* from seed, and try it planted between stone slabs, plunged deeply into my moraine, as a likely method of inducing the neater habit which I desired.

The finer atmospheric conditions having lured us to a high and exposed situation, the weather now changed for the worse, and almost before we could get the camera packed up it was raining in torrents. This decided us to make a dash for a sheltering ledge which we had passed a few minutes earlier. There on the alp, rose a giant boulder, whose lower portion had weathered at a much greater rate than its summit, leaving a projecting slab-like roof jutting forward some two feet. Into this niche we both climbed, flattening ourselves back against the rock as much as possible. Owing to the water from the adjoining slope running towards this sheltered spot, we could not find a suitable seat on the ground, while the height of the roof being only four feet six inches, we were unable to stand erect. The extremely restful position we were obliged to take up can be better imagined than described. However, by its fierceness, we thought the rain was only a passing shower, so faced the situation patiently.

After three-quarters of an hour had passed, and it rained even harder than ever (the aspect of our refuge being due east the direction from which the



swirling torrent was driving), we began to wonder whether we were greatly benefiting by its shelter. When at a slight pause in the rain, I essayed, with numbed fingers, to get at my watch (the wind passing over the snowy heights of Mont Rosa before reaching us, cutting like a knife), I found it was time to think of returning to Zermatt, especially as we proposed seeking a new route on our way back, by zig-zagging down to the valley below. We therefore decided to make one last spurt to reach the edge of the ridge we had been attacking, from which we felt sure we should see at least the base of the Matterhorn, across the Furggen Glacier. When at last we climbed up the steeper track between the snow slopes, with the wind and rain shrieking and lashing at us from behind, we found to our disgust that five hundred yards was the extent of our vision, the clouds lying low over the glacier, giving us not even an indication of its contour, let alone a view of the Matterhorn beyond.

Hastily reversing our direction, we made our way back, a slow process in the teeth of the storm, which sent blinding showers of snow whirling in our faces. While a narrow track is simple enough to negotiate in reasonably fine weather (after the first fright of its appearance has been overcome), it is a vastly different matter with a hurricane raging. If the wind had only been continuous it would not have mattered so much, but, due I suppose, to deflections caused by the neighbouring mountains, it came in sudden squalls, which

nearly upset our equilibrium before we could "lay up" to it, and when this desirable angle had been attained, the blast would suddenly cease, rendering it difficult to avoid lurching sideways over the edge of the track. In one place which we had passed during the afternoon, a plank bridge had evidently, in by-gone times, spanned a gulf some fifteen feet across, gouged out by a mountain stream which there descended with great noise. At the time of our visit this bridge had been reduced to one tottering plank, necessitating delicate balancing if a plunge into the ice-cold water was to be avoided. From its appearance I judged that it had reached the condition of the camel in the fable, needing only one more straw to upset it, and this last straw was provided by our return. Remembering our difficulties on the upward journey, we anticipated trouble, owing to the blustery conditions, as soon as it came in sight—and sure enough, when about to follow my companion an extra gust of wind, in conjunction with the slippery state of the unstable plank, caused either myself or the board to slip, and I took a header towards the opposite bank. Fortunately for me, a few scrubby bushes, wind blown into an almost prostrate habit, trailed along the edge of the gap, and to these I clung with amazing tenacity, then, having regained my breath (which had been somewhat unceremoniously jerked out of me), a spring off a projecting stone below and a pull from my companion, landed me safely on the brink. I felt I had been quite near enough to that



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GENTIANA BRACHYPHYLLA.



creaming snow-water to satisfy my desires for some little while to come.

Hastening onward, we in due course arrived at the pine wood, and there bore to the right, dipping down to the meadow land below. From the condition of the grass it appeared to have rained but little in that part of the valley, and since we were by that time within reach of excellent shelter, the rain ceased, and the sun came forth in a few faint gleams! Where blocks of stone reared themselves from the grass, resembling in some places rough terraces on the inclined meadows, tufts of *Aster alpinus* made bright patches, growing outward in a semi-prostrate manner over the edges of the rocks. The daisy-shaped flowers, one-and-a-half to two inches in diameter, were of a pale purple colour, centred by a golden eye, while the narrow foliage was slightly downy. Growing in masses, this Aster was distinctly effective, and almost encouraged me to try it again in my garden, where, in the past, the slugs had religiously eaten every particle during the autumn and winter months, despite frequent hand picking, which appears the only way of effectively reducing the numbers of these pests, while even that fails at times!

The brilliancy of the lower meadows and the immense variety of flowering plants therein was almost beyond belief. The Campanulas, both *C. rotundifolia* and *C. rhomboidalis*, made a gloriously blue haze over the grass, while the erect heads of *Phyteuma spicata*, cream in colour, and the pink, somewhat bottle-brush-like

flowers of *Poterium sanguisorba* delightfully relieved the whole.

When within a short distance of Zermatt, we came suddenly upon a sloping meadow which was swept with glorious waves of the snow-white flowers of *Anthericum liliastrum*, more correctly described as *Paradisialia liliastrum*. As in the bottom of the valley, where they were growing so plentifully, the wind was moderate, I decided to make a negative of them, and though the hour was late I was able, by elaborate precautions with wind screen and mackintosh, to give a sufficiently long exposure to secure the flowers without movement. The reproduction on page 221 gives a fair idea of the graceful trumpets of pure white (against which the yellow anthers stood out brilliantly) which, rising on fifteen-inch stalks, charmed us so.

Packing up, we resumed our walk, soon reaching the cobbled street which led to Zermatt, when in a few moments we arrived at our hotel. Dinner over, we sauntered through the village, the main street of which is quite a promenade from 8 p.m. onwards, the beautiful summer night, with just a touch of crispness in the air, contrasting forcibly with the hurricane we had experienced during the afternoon.



## CHAPTER XXI

### WE VISIT THE GORNER GRAT

THE morning of July 8th broke gloriously fine, and we decided to start as early as possible for the famous Gorner Grat. This was the more fortunate, as the following day we were obliged to commence our return journey, and since the evening of our arrival not so much as a glimpse of the Matterhorn's summit had we secured. Accordingly, after packing up our lunch, consisting of sandwiches and tinned plums, this latter being a great luxury, thanks to having our headquarters in a neighbourhood where shops existed, a striking contrast to our quiet "base" at Gruben Meiden, we started off well supplied with photographic plates, hoping to secure some records of the scenery, and any choice plants we might be fortunate enough to come upon.

We followed the road leading southward out of the village for a short distance, noticing the quaint church on the left, then crossed the Visp by a rough bridge, and ascended the rising ground through pastures as far as the white stone church of Winkelmatten. There we branched off to the right, and crossed the Findelenbach, which just above that point descends in a beauti-

ful fall from a considerable height. Close to this cascade is the inclined railway, leading directly to the Gorner Grat, largely used by those to whom the tramp up the hills is more tiring than enjoyable.

Upon reaching a solitary hut above the Schwegmatt, we looked down upon the lower end of the Gorner Glacier, while almost exactly opposite was the faint ruck on the hillside which we recognised as the trail we had followed when overtaken by the squall a day or so before. The Furggenbach, issuing from the Furggen Glacier, also an old acquaintance, made a silvery streak as it bounded down the hillside.

Taking thence the zig-zag path through woods of Stone pines, between whose rugged branches we occasionally secured glimpses of the Zermatt valley, and the mountains to the west, we, in due course, reached the Riffelalp. From this fine open position,—a somewhat level plateau 7,300 feet high—a superb scene awaited us. Immediately opposite rose the colossal Matterhorn, its precipitous eastern face still retaining a large quantity of snow, while at its base the dazzling Furggen Glacier streamed downwards, making in one place a semi-circular detour, owing to a wall of dark-coloured rocks barring its progress. As though hesitating to expose its full glory to us, even on such a beautiful morning, a delicate grey cloud hovered over the north-east *arête*, lending perhaps an added charm, owing to the suggestion of mystery behind its billowy folds. Far below, the



*ANEMONE BALDENSIS* ABOVE THE RIFFELALP.

(See page 287.)



tawny green of the Alps merged into the richer colour of the pine trees, where the ground fell away steeply to the Zermatt valley—while a ridge on the Riffelalp near at hand lay sombre in the deep shadow cast by the higher rocks upon which we were standing, giving just that touch of solidity to the composition which is so frequently absent in distant mountain scenery. Behind the flashing pinnacle, the deep blue of the sky accentuated every high light, creating a picture which, if recorded in all its purity of colouring, would have been a “jewel of the first water.”

Having neither the materials nor the skill with which to paint it, I brought my camera to bear, and the illustration on page 272 suggests in a modest way the beauty of the scene. Nor was this the only feature of note, for turning to the right, the glorious Dent Blanche, Ober-Gabelhorn, Rothhorn, and Weisshorn, progressively came within our vision, each seeming to challenge the others for supremacy.

After pausing here long enough to become saturated with the glories of these giants, we made our way along the inclined track, which there zig-zagged over open hillside (having passed the tree-line near the Riffelalp Hotel) decked with all the usual plants common to that altitude. On the stony banks bordering the track, we came upon straggling colonies of *Anemone baldensis*, a lovely windflower growing four to six inches high, whose dainty blossoms, projected singly well above the foliage, were white inside, and

pale pink merging to rich rosy lilac on the reverse, while the buds, as they emerged from the earth, were slightly silky. It is not infrequently described as a plant requiring partial shade, though as we found it there was no question about it being a sun lover, though of course in such a position it would be copiously moistened by the percolating water from the immensely higher ground above. Upon attempting to unearth some of the plants, we found that the black woody roots wandered away to an immense distance, rendering it necessary to form a miniature quarry by digging out the mass of stone fragments which composed the soil about it. After much labour, we succeeded in obtaining a few plants in moderately good condition, and upon reaching home they were plunged into cocoa-nut fibre mixed with sand. After a few months of this convalescent treatment, the survivors were planted in my moraine, and though they are now out of sight, resting I hope, I am sanguine of their re-appearance in the spring. As it is said this *Anemone* is easily raised from seed, that would probably be the most satisfactory way to obtain healthy plants, it evidently being one of those subjects which prefer to wander undisturbed from childhood amid gritty soil, which though moist, is perfectly drained.

Taking but little notice of the now familiar cascades of *Dryas*, which spread in vast patches beside the track, alternating with straggling mats of *Linaria alpina*, whose myriad flowers hid every leaf—past



ANDROSACE CARNEA.  
(See page 290.)





swampy places where *Primula farinosa* and butterworts struggled for possession of the wet humus, we eventually reached, and passed the hotel, standing sentinel-like, on the Riffelberg.

Here the Breithorn's rocky crest rose before us, the mid-day sun beating down almost vertically upon it, causing the immensely steep rocks forming its northern buttress to look coal black, in contrast with the adjacent snows, whose reflected light almost blinded us.

The Gorner Grat, a rocky ridge rising from the plateau of the Riffelberg, was still some way ahead, while the intervening ground, covered sparingly with short turf, was enamelled with flowers of the most brilliant and choice description. First of all, on the lower ground bordering a small stream, spread pink drifts of the Bird's-eye Primrose, all in their fullest beauty, while twinkling at us from higher rocky nooks were the rosy flowers of *Primula hirsuta*. Hardly had we passed these dainty subjects before the ground was starred with glorious tufts of *Gentiana brachyphylla*, so thickly flowered as to make sapphire blobs on the grass fifty yards ahead. So strikingly beautiful were these masses of flowers, that I could not resist photographing them, though some of their charm is lost in reproduction. The illustration on page 282 gives a fair representation of the prodigality with which they blossomed, and also faithfully renders the beauty of their form. If only we could induce this

brilliant mountaineer to display its charms, with a fragment only of the freedom with which it decorates the higher alps, how beautiful it would make our gardens, but alas, it is as shy and doubtful, with me at least, however carefully I nurse it, as it is prolific in the mountains, though I must say (before they vanish altogether) that the collected tufts which I transferred to my moraine are still alive and seem inclined to grow, but I have experienced these temporary joys before, and hesitate to make any rash statements.

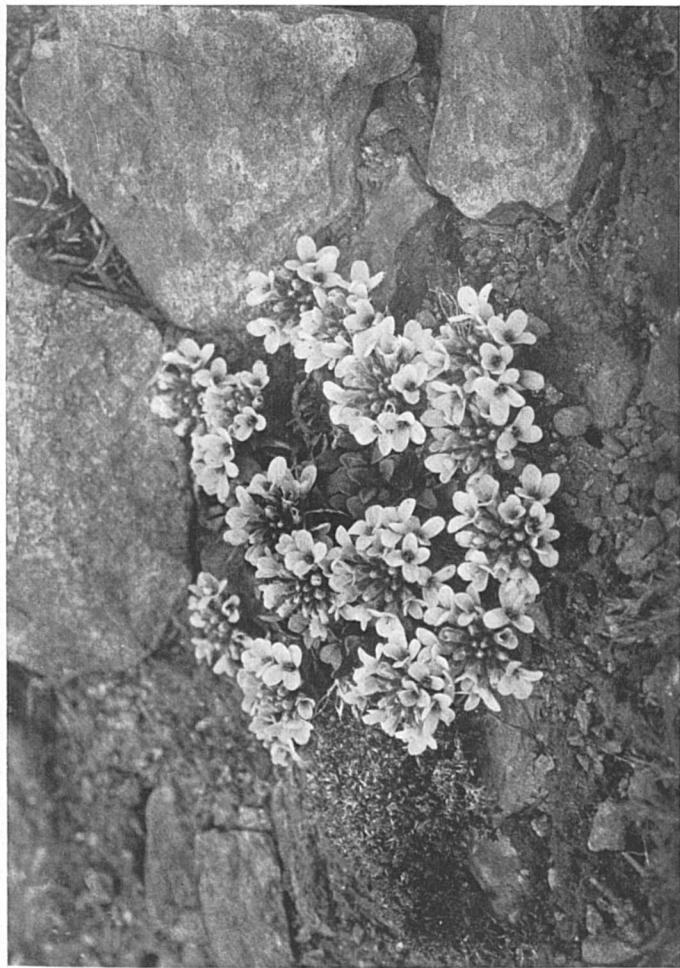
As we strode over the turf, avoiding as far as possible damaging the gentian flowers, the sward became more irregular, and in somewhat saucer-shaped depressions, whose origin I failed to discover, the delicate pink flowers of *Androsace carnea* grew in isolated colonies. This wee plant (scarcely three inches high where we found it) grows in tiny rosettes of narrow dark green leaves, making dense spiny cushions, suggesting, until we handle them, that they are prickly. From the minute growths rise fragile stalks, bearing lax heads of primula-like flowers, very pleasing in contrast with the adjoining grass, though naturally of a much more tender scheme of colouring than the neighbouring Gentians. It is not a really difficult plant to cultivate in deep peaty soil, liberally mixed with grit, though owing to its drawf stature it is liable to be overgrown by its neighbours. The plants I collected are doing well in such a compost, and I hope will shortly flower. The reproduction on page 288 shows a colony of these

little flowers, and in the foreground the prostrate leaves of *Anemone vernalis*, whose shaggy flowers decorated the ground in increasing numbers as we rose.

Just before the grassy upland gave way to the shingle slope—streaked in many places with snow—another prize awaited us, and one which we had been keenly on the look out for, though hitherto without success. Known under the various names of *Aretia*, *Androsace* and *Douglasia vitaliana*, and owing perhaps in part to its ponderous and uncertain title, this sweet little plant so glorious with its clear yellow flowers, like replicas in miniature of the *Jasminum nudiflorum* which gladdens us at Christmas time, has unfortunately a doubtful reputation in the alpine garden. Growing freely on the moraine into tufts of narrow, slightly glaucous foliage, it promises well enough, but rarely, if ever, fulfills. Having grown it for some years, I must regretfully admit that never once, despite a robust appearance, has it produced a single flower. After all these hopes deferred, my readers will realize with what joy I descried sheets of yellow falling over the uneven ground above the Riffelberg, and upon hastening up to them found the alp splashed and streaked with hundreds of these dainty flowers, rising from wiry growths almost hidden from sight among short turf, moss and *Semp. montanum*. Realizing at once the beauty of the plant so ravishingly described by other travellers, I was desirous of securing a photograph of it, so unhitching my camera'sack I focussed up

and prepared to make the exposure. Knowing it would need a light filter to reproduce in monochrome the luminosity of the bright yellow flowers, I multiplied the exposure, as shown on the Watkins meter, by the requisite figure, and awaiting a lull in the wind—which happened to be gentle that day for a wonder—made the exposure. Carefully packing up my kit, so as to lose no more time, I was moving off to join my companion, when I remembered that I had made no note of the matter. While jotting down the necessary items, it suddenly dawned upon me that despite my care to avoid all possible errors I had entirely overlooked putting the light filter into position. Not only would my negative be unscreened, but also seriously over exposed by the allowance on account of the light filter which I had failed to use. There was nothing for it but to start afresh, and after some little delay I secured another portrait of my *Douglasia*, and I think the picture of it appearing on page 296 amply rewards me for my efforts.

The stony waste over which we finally climbed to our destination was literally alive with beautiful flat cushions of *Thlaspi rotundifolia* in much greater profusion, and far better clusters, than we had seen near the Muverain (see opposite). In every crevice between the stones, and they were many, the rich lavender flowers nestled in compact tufts above the tiny leaves, while minute mosses and highly coloured lichens of great size adorned the rocks. So closely



A HIGH ALPINE CRUCIFER WITH LAVENDER FLOWERS (*THALASPI ROTUNDIFOLIA*).



had our attention been riveted to the flower-strewn ground over which we had been tramping for the previous hour, that it was not until we reached the summit of the Gorner Grat that we had time to enjoy the panorama which had opened up around us. What words will portray the imposing scene which was there spread out? Our astonished gaze roved over the brilliant spectacle—first one way and then another—taking in the beauties of the snow-clad peaks, numerous glaciers, and the soft, long-drawn vapours of the summer day, without troubling as to the exact item which composed the glorious whole.

When the first breathless admiration had to some extent calmed down, we commenced afresh, with more deliberation, to survey the enchanting circle. Facing south-east, there rose the vast rounded bulk of Monte Rosa, snow-covered from foot to crest, with the exception of a few perpendicular cliffs, which threw their white mantle on to the enormous Gorner Glacier winding in a sinuous stream at its base. Divided from this beautiful summit by a second glacier, the Lyskamm reared itself aloft, appearing from its less distant position to exceed in height its royal neighbour. Passing over several smaller conical peaks, the rocky outline of the Breithorn extended westward till it merged into the Théodule Pass, with its attendant glacier stream. Here the glorious tale was taken up incontestably by the "lion" of Zermatt, the vast rock-pyramid of the Matterhorn soaring above the

silent snowfields. So marvellously clear was the air, that with the unaided eye we could easily discern the hut (really a small hotel) on the lower part of the North Eastern *arête*, though it was seven or eight miles distant. The nearest neighbour to this beautiful peak was the snow-covered Dent Blanche, closely followed by the more rocky pinnacle of the Gabelhorn, while between that and the similarly jagged summit of the Rothorn, the glassy surface of the Trift Glacier descended. Shimmering in the intense sunlight and apparently towering high above Zermatt itself (which was hidden from view by the steepness of its valley) the refulgent Weisshorn then drew our attention, reminding us that its opposite face was smiling down upon the Schwarzhorn Hotel, so long our headquarters in the Turtmannthal. The Mischabelhörner, combining the Täschorn and Dom, huge spurs of the Monte Rosa, extending northwards between the twin valleys of Zermatt and Saas, rose up on our right hand, piercing the thin wisp-like clouds that mantled their summits at an altitude of nearly 15,000 feet, while the snowy crests of the Alphubel, Rympfischorn, Stockhorn and Cima-di-Jazzi linked up these giant with the rounded curves of Monte Rosa itself, bringing us once more to our starting point. All along the base of the main chain wound the immense Gorner Glacier, joined in its course by six others, all conveying their quota of frost shattered *débris* towards the terminal moraine, among whose stony slopes the turbid waters



of the infant river Visp first see the light. While Monte Rosa is frequently assumed to be the highest summit in Switzerland, I understand that the last few hundred feet are really in Italian territory, so that the glory of the premier position has to be given to the Dom.

Having feasted our eyes again and again on the dazzling panorama, we unpacked the kit and made a number of exposures, taking care to justly allow for the immense amount of reflected light and the considerable distance intervening between the nearest object and the camera. The frontispiece and illustrations on pages 272 and 278, while entirely failing to reproduce the brilliancy of the scene, will, I hope, roughly indicate the snowy world, to which our four hours tramp had transported us.

While looking down the steep sides of the rocky Gorner Grat, I was interested to observe a number of birds about the size of Jackdaws, though of rather lighter build, soaring about below us and silhouetted against the snow-covered glacier beneath. These were doubtless, Red Billed Choughs (*Graculus Graculus*), birds inhabiting the cliffs and mountains of Europe and Central Asia. The plumage was purplish black, while the legs and beak were deep vermilion. These were the largest feathered inhabitants of the mountains which we had met, no sign of the Royal Eagle having been seen in the Valais, suggesting that the Oberland, where we observed it, is a more favoured haunt. The

pangs of hunger demanding attention to our commissariat, we unpacked our lunch, and satisfied the ravenous appetite which the mountain air had induced, terminating with an attack on the tin of plums. As there was no water visible on this exalted rock plateau, we were counting on the delicious syrup in which the fruit was plunged to allay our thirst. To render the opening of the tin as easy as possible there was a neatly arranged tang of metal which should readily peel off in a long ribbon by the use of the key which we had thoughtfully brought with us. Hardly had a couple of turns been taken with this instrument, when to our dismay the tang broke off, leaving a small opening through which the precious juice welled out. Having nothing more formidable than a strong knife with which to assail the tantalizing canister, we took it in turns to cut and prize off the upper portion. At every attempt the liquid contents oozed out, threatening to deprive us of our longed for draught. Seeking a way to avoid this wastage, the brilliant inspiration came to us, to try and pour the syrup from the small orifice into the drinking cup which we carried. With great care we succeeded in almost filling it, when with a snap the wretched vessel closed up; a habit which these portable cups have at a critical moment. Feeling sure that the only way would be to remove the top so that we could ladle out the contents with the spoons we carried, we again had recourse to the knife, and after stabbing viciously



DOUGLASIA VITALIANA.



at the tough lid, managed to cut round half of it ; a few moments more and we should have been able to turn back the flap, when, owing to the movement of a small pebble on the ground beneath the tin, the whole thing capsized, and to our dismay shot from our grasp, careering down the slope, finally coming to rest against a rock. In the endeavour to rescue it by a sudden swoop from my kneeling position, the knife struck the stony ground, breaking off the blade like a carrot, leaving me with a stump, which, though useful for scraping off the liverwort and moss which *will* form on my pots of seedlings, reminds me constantly of the Gorner Grat and the juicy plums (without the juice) which we eventually retrieved after their mad gallop over the most elevated portion of our Swiss trip.

After enjoying three hours on that rocky prominence we gathered up our traps and commenced the descent. Selecting a slightly different route over the shingles, we found quantities of the wee crucifer, *Draba aizoides*, nestling on the larger rocks, and gaily covering its spiny cushions of deep green foliage with brilliant yellow flowers. Towards the southern limit of the incline the ground was lavishly covered with the "red snow" which we had also encountered on the heights above the Turtmannthal, though near the Gorner Grat it was of a richer hue. It is difficult to understand what this microscopic lichen-like plant finds to feed upon in the cold expanse of snow crystals many feet in thickness.

Plunging down the alp at a vastly different rate to that maintained during the ascent, we soon passed the Gentian and Douglasia spangled turf to the colonies of *Anemone baldensis*, growing beside the inclined track above the Riffelalp Hotel. Thence onwards and downwards we galloped through the pine woods until we were suddenly brought to a halt by thickets of *Campanula barbata*, whose china-blue bells hung pendulous from the rigid stems. These flowers, borne three to five on a spike, are beautifully fringed with delicately silky fibres at their mouth. The plant has the reputation in the garden of being little more than a biennial, though I have flowered the same clump for four years in succession. Perhaps owing to its dislike of much moisture during the winter, the plants when they develop into a number of crowns retain the dampness to such an extent in our moist climate that they rot. However, as it is easily raised from seed, it is no difficult matter to keep up one's stock, and few plants are more attractive than the bearded *Campanula*, when during May it decorates some half shady ledge in the alpine garden.

When nearing the level of the Zermatt valley, we turned off to the left so as to visit the Gorges du Gorner. This is a rocky canyon through which the Visp dashes in brawling cascades, frequently bounding over mossy boulders which transform its water into seething cauldrons, half hidden in spray, as it swirls and eddies between the obstructions.

In several places along this impressive ravine, I noticed the remains of giant "pot-holes" indicating how the stream had cut its way deeper and deeper into the living rock, which doubtless at some remote time had been covered by the mighty Gorner Glacier, which though still of such immense size, is, like most other Swiss glaciers, gradually retreating.

Emerging from this vapour-filled chasm, we rapidly crossed the flower-swept meadow land, bordering the stream, and within half-an-hour had re-entered Zermatt, thus bringing to a close the last and I think one of the most enjoyable days, I ever spent in the mountains.

## CHAPTER XXII

### HOMeward BOUND

THE following day we were up early and caught the train from Zermatt soon after 7 a.m. As we moved out of the station we took a last lingering farewell of the glorious Matterhorn, which rose unveiled and lovely in the clear morning air. The scenery the whole way down the valley was beautiful, and the peasants were busy in the hayfields, making the most of the cool hours of the day. Close to the railway line, growing in the crevices of the stone wall bounding it, were gauzy clusters of *Gypsophila prostrata* lying rosy in the sunlight, while in the meadows, where the grass remained uncut, were blue drifts of *Campanula* blossom, stabbed here and there with *Lilium Martagon*, the red Turk's Cap Lily, whose handsome spikes of ruddy flowers with recurved petals, glowed brilliantly.

Crossing and re-crossing the river which had by then considerably increased in volume, or traversing dizzy viaducts high over its seething surface, we eventually reached the small town of Visp (or Vierge), situated at the lower end of the Zermatthal, just where it opens into the great Rhône Valley. Here we were obliged to wait a train bound for Lausanne, and when





THE MOSS CAMPION (*SILENE ACAULIS*) ON THE MORaine.  
(See page 253.)



this leisurely appeared, we took our places and were soon bowling along westwards, passing the quaint village of Turtmann on the left, with its waterfall visible beyond the dark and weather-stained châteaux. After waiting some time at Sion, which reminded us of the pleasant ramble we enjoyed through its quaint streets on the outward journey, we rolled along past Bex to the lake side station of Montreux, where we detrained, having decided to complete the journey to Geneva by boat, across Lake Lemman.

Montreux is a beautiful town with pretty villa suburbs on the adjoining hillsides, and has an attractive water front. The well furnished gardens, in which the flowers and foliage appeared wonderfully luxuriant, greatly added to its charm. Half a mile from the pier is the famous Castle of Chillon, picturesquely situated on a rocky knoll a few yards from the shore, connected with the latter by a bridge, though the water which used to flow under it has now disappeared.

There is a good service of steamers plying on the Lake, and upon one of them we took passage to Geneva, fifty or sixty miles to the south-west. The scenery from the deck of the boat was gloriously beautiful, the deep blue waters, churned into seething foam in the wake of our vessel, extended five miles away to where the pine clad ramparts of the Valais rose sheer from the lake. High above us towered those rocky heights forming enormous foot-hills leading to

the snowy giants we had been admiring close to the Italian frontier.

As our steamer glided away from the wharf, a charming picture was formed by the gaunt, dark coloured teeth, lightly snow-covered in places, of the glorious Dent du Midi rising directly from the valley to an altitude of over 10,400 feet, while the Castle of Chillon, standing on its promontory close to the lake side, beautified by a wealth of verdure which gradually merged into the softer tones of the rising hills above the town, splashed and barred with the bluish hue of the vine, provided as pleasing a foreground as could be desired. From the colour of the vine leaves, it was apparent that Bordeaux mixture was lavishly used in spraying the plants; in fact we saw some of the peasants at work with portable sprayers actuated by a small pump. It would appear as though this invaluable fungicide is being very generally employed, and should in course of time eradicate many of the diseases to which the vine is heir.

The colour of the water of Lake Lemman is of a rich velvety blue, with less of the green tinge which characterizes the Lake of Lucerne, beautiful as that is. This coloration, it has been suggested, is due to the presence of iodine in the water, and again, to minute particles of a talc-like substance which reflect the blue rays, while absorbing to a large extent the other components of the sunlight. It is thought that the great depth of the water, exceeding 1,000 feet in some

places, has a close relationship with this phenomenon. One of the characteristics of the stony soil in the Turtmannthal, is the large quantity of extremely thin flakes of a talc or mica-like substance which glitter among the humus and grit. It may be the smaller ground-up fragments of this material eventually find their way into the lake, *via* the river Rhône, where, owing to their extreme minuteness, they would be held in suspension for a considerable time, and cause this beautiful colouring. In several places we passed flocks of swans upon the surface of the lake, their pure white plumage affording a startling relief to the deep tone of the water. Away to the south, the foot-hills of the Valais, gradually merged into the mountains of the Savoy, extending in an unbroken line right away to Chamonix and Mont Blanc, though the latter summit we did not see till we were almost at Geneva itself.

While the number of motor boats in use on the lake appears to be increasing, there are still a few extremely picturesque craft remaining, in the shape of large barges, principally used for carrying stone, and these are propelled by the wind acting upon graceful lateen sails of considerable size. At a distance these boats suggest large birds hovering just above the surface of the water. The long line of the Jura mountains, which had been a blue band devoid of detail when we passed them in the train on our way to Bex, looked very lovely with the afternoon sunshine pouring upon

them, while on the lake shore many clustering villages gave the whole a touch of animation.

Just before 5 p.m. our vessel swung into her berth at the Quai-du-Montblanc, and as we walked along the tree-shaded promenade, the alpine glow was tinging the snow cap of Mont Blanc, eighty miles away to the south-east, with a soft rosy light. Repacking our traps on our arrival at the hotel, where we found our bags which we had posted from Gruben Meiden quite safe and sound, we made all ready for our departure. Early in the evening my friend Mr. Dallinges joined us, when of course we had to recount our doings since leaving Geneva. At half-past eight we drove to the railway station and secured seats in the Lauzanne-Paris express, due to leave at 8.50, when, with many thanks and hearty farewells to our friend, we steamed out on our all night run.

At Belgrade we were halted to enable the customs examination to take place, though we did not leave our carriage. When my photographic plates were exhibited a solemn consultation took place between the white-suited, gold-braided official, flourishing a cane, and his attendants. After several of the packets of my beloved exposures had passed from hand to hand, their weight being seriously estimated, a volley of questions were addressed to me, none of which I understood. A happy inspiration, coming like a lightning flash to my mind, I showed my railway coupons, indicating that I was not intending to

"dump" these foreign made articles upon French soil, but was going straight through to London. This acted like magic, all three of our visitors skipping into the next compartment, where the occupants were soon surrounded by their belongings pitched headlong out of their bags.

We had a hot, though on the whole pleasant journey through France, and boarded our steamer at Dieppe.

With the reappearance of the chalky height of Beachy Head, looking at first, through the heat haze which lay on the offing, like a ghost of its noble self, we felt that our holiday was rapidly approaching its termination, and while looking forward with pleasurable anticipation to being at home again, it was with feelings of intense regret that we could no longer enjoy the sight of the beautiful and impressive mountain scenery amid which we had for some time been living. As our express train crawled slowly over the fair southern counties, as though to give us ample time to compare their gentle undulations with the mighty folds of the mountains we had so recently left, we could not but feel astonished that the brilliant plants, which jewelled the alps in such wonderful profusion, deigned to exist at all under the lowland conditions prevailing over the greater part of our pleasant land. It says much for their robust constitution and in most cases a generous nature, showing a desire to live, that they beautify with their lovely blossoms our alpine gardens, even so close to the smoky city as my home here at Woodford.

With perhaps the exception of a few days when the weather was unsettled or definitely rainy, we could hardly have arranged a more enjoyable trip, while thanks to the photographic outfit proving so eminently satisfactory, the resulting records will, for many years to come, cause our visit to the Valais to remain as vividly before our mind's eye as though it occurred but yesterday.



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