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Edited by ERNEST E. ROBERTS.

CONTENTS.

	PAGE
Edouard Alfred Martel	THE EDITOR 105
Some Mountains of Cape Province	N. P. ELLIOTT 117
A Note on the Theban Hills	The late W. E. EVANS 125
Route Z—Brig to Grindelwald	The late W. E. EVANS 127
Omul—Getting fit for War	H. G. WATTS 133
A Happy New Year	B. NELSTROP 139
The Enniskillen Gondoliers	THE EDITOR 144
Rescue Call to Rowten	153
War Services	155
In Memoriam	157
Chippings	167
On The Hills	172
Cave Exploration	177
Reviews	183
Club Meets 186.	Club Proceedings 189.
	New Members 192

ILLUSTRATIONS.

E. A. Martel	Frontispiece
Martel going down Gaping Gill	116
Sell Gill Party (1897)	116
Donker Kloof and Haalhoek Spitz	120
Ialomitsa Valley	136
New Year on Snowdon: Lliwedd	142
In Pollnagollum	152
T. S. Booth: Edward Calvert	158
G. T. Lowe	160
J. Wardle: S. Thompson	164
W. Parsons: H. Brodrick	166

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EDOUARD ALFRED MARTEL

(1859-1938)

By THE EDITOR.

The great geographer, Edouard Martel, died in June, 1938 in his 79th year. He was an Honorary Member of the Alpine Club, of our Club since 1906, and was President of the Société de Géographie, 1928-31, Membre du Conseil Supérieure d'Hygiène, Administrateur du Touring Club.

The Editor naturally expected to draw on French magazines for an account of his career, but *Spelunca* is so sternly scientific that it appeared in 1939 (No. VIII.) without even a note of Martel's death. A memoir was promised by *La Géographie* but nothing appeared up to the last number seen, May, 1939.

In *La Montagne* (July, 1938) there is a memoir which is appreciative but vague, and contains a passage depreciatory of Martel as not having been a "bio-speleologist," in other words a "bug-hunter." One might as well deplore that Whymper was not a ski-runner. The unfortunate thing is that the *Alpine Journal* notice was compressed from this into four paragraphs, one deplores his inadequate bug-hunting, one represents him as a tourist publicist and a writer on caves rather than an explorer, the last as a good teacher, a word not occurring in the French. I am afraid the phrase commonly used of Martel, "The Master," led the condenser on the wrong track in his free translation.

My impression is that Martel had outlived his contemporaries and that there was none who could write without research of his doings and career.

The man who dared to descend Gaping Gill without expert support, and to risk knots in his life line, who revealed the vastness and beauty underground in France, who proved the truth up to the hilt of what to-day seems obvious about limestone, who taught the French the difference between pure



E. A. MARTEL (1896)

and poisonous water supply, deserves from some of his humble followers, an attempt at an adequate story.

E. A. Martel was born at Pontoise. He must have belonged to a well-to-do family as at seven years of age he was taken into the Caves of Gargas and Eaux Chaudes in the Pyrenees, and at twenty he visited the Adelsberg Cavern (now Postumia). His profession was law and from 1887 to 1899 he practised at the Paris Bar.

In 1883, '84, '85, wandering into every corner of the strange and wonderful district of the Causses, he met high above the gorges the yawning pot-holes, information about which came down merely to legend and superstition. In 1888 a visit to Han in Belgium fired him to tackle the abysses that had so impressed him. But in these early years of manhood he did much climbing in the Alps, for in 1895 he had travelled the Alps from end to end twelve times, and published with Lorria *Massif de la Bernina*.

Martel's first pot-hole campaign met with astonishing success, though he had only 40 feet of ladder. First he traversed the labyrinthine watercourse of Bramabiau from swallet to outlet, descent 300 ft., air-line 600 yards, a lucky feat the like of which I doubt if he was able to parallel, though he proved such traverses possible more than once. Then by rope-hauling he did a four pitch pot, and went down the great chasm of Dargilan to reach the dry bed of an ancient river, the prettiest cave in France in its day, though its forest of stalactites may now yield pride of place to those of the Aven Armand (1897) and the Aven d'Ornac (1935).

Next year, 1889, he had an amazing four weeks in the Causses, with his cousin, Gabriel Gaupillat, and two local men, Foulquier and the famous Armand. The party had 100 feet of ladder, relied principally on rope-hauling, and had assistance of course.

I trace *Aven de Boussoles*, 3 pitches, 180 ft.; *Aven de Combelongue*, 280 ft. top pitch 65 ft. ladder, several narrow pitches climbed with rope. Then *Aven de l'Egue*, first pitch 200 ft. laddered half-way and then descended on the body-line. Climb to 295 feet depth. Foulquier, last up, tied himself on with a slip knot and was nearly "done in." The party spent the night practising knots!

This narrow escape made Martel adopt a curious method which I doubt if anyone else has used regularly. The life line was never after tied round the body, but round a notch in a two foot stick. On the stick sat the man, kept safe only by a double cord loop over one shoulder outside the rope, and under the other armpit. One cannot conceive how in moving about on a ledge with a slack rope, the whole affair did not sometimes come loose.

Possibly it did, and the fact has been kept quiet. Attentive reading of Martel's and Joly's writings shows how certainly everything that can go wrong in a pot-hole will do so in France as in England. That is why so many of us are averse to practices and gadgets which work admirably in daylight. For example why not have a belt with a hook on it to put round a rung? Joly, the leading spirit of pot-holing in France between wars, has one, and when surprised by a flood in Paradis on his way up 150 ft. of ladder, the hook caught the ladder, held him up and by main force he had to be hauled up, ladders and all (probably his light wire ladders).

Next, *Aven de Guisotte*, total 236 ft., first pitch 220 ft. ! After 100 ft. Armand could not be heard. He therefore sat tight at the bottom until Martel arrived on another rope. Another lesson. Never again did they go down over a huge distance without a telephone.

Aven de la Bresse. Several pitches, total 394 ft. There was a whole series of mischances and they got really angry with one another.—*Aven de Tabourel*, 4 pitches, 436 ft. Ladders lowered and refixed three times.—*Aven de Hures*, 3 pitches, to water at 381 ft. When dry, if a certain tree trunk can be passed, this pot has been done to 672 ft.

Abime de Rabanel was the most celebrated and monstrous of these yawning gulfs. Martel was below five hours the first day. He was lowered 425 ft. to the top of a talus slope, 115 ft. high, down which he went into a great hall with superb stalactites. The next three days were taken up with Armand's construction of a great tripod and windlass gear for two ropes. With the aid of Gaupillat and Foulquier Martel then took the telephone on to an 80 ft. pot, and descended to a depth estimated at 695 ft. This was the first of the really deep French pots to be done. It is now put at 195 m.

(640 ft.) but several of those which nominally exceed it will probably have some metres knocked off.

Grotte de Sargent, 460 m. long. After wading to the waist for 60 m. Martel swam the end pool naked. Another "never again"!

Abime du Mas Raynal. A noted chasm, first pitch 213 ft., total 345. Here they found a great pool, 60 yds. by 15 yds., running off in cascades, and explored 350 yds. of watercourse. On the surface gathered all the countryside and a *bal champêtre* went on. In the rock wastes of the causses, denuded recklessly of their forests, the pots are almost all dry, and this was the first time Martel had reached running water.

The last and greatest discovery came next day but one—Padirac! The great chasm of 175 ft. had been done once to recover a corpse, but the four went further and came upon an underground river. The second day Martel and Gaupillat in a collapsible boat made a voyage lasting $6\frac{1}{2}$ hours. For long distances the stream goes down in basins great and small, *gours*, and each slippery rim means a landing.

Les Cevennes was published in 1890, and from that date the Causses began to develop as a tourist district. It is no wonder that Martel stood in high regard locally, and that at the junction of the Tarn and Jonte there is since 1927 a monument to him and his comrade Armand.

The 1890 campaign was a fortnight in September and began by finishing off Padirac. The four, with De Launay, were underground 23 hours, and reached a point estimated at $2\frac{1}{2}$ to 3 km., actually 2 kilometres. Later some progress was made in 1900. (In 1938 July with all the advantage of 1,000 yards sight-seeing development made progress with great difficulty and after $11\frac{1}{2}$ hours and a further voyage of 350 yds. turned back where he saw the river still flowing quietly ahead.)

Igue de St. Martin, nearly 300 ft., first pitch 213. A murderer had thrown himself down a branch of this shaft the previous winter, survived, was rescued and sent to prison.—*Igue de Bar*, total 213 ft.—*Grande Igue de Cloupman*, nearly 300 ft. in one pitch.—*Igue de Roche Percée*, 328 ft. in one pitch. Other smaller pots and caverns. Martel also visited and studied the Grottos of Han and Rochefort in Belgium.

1891. He was equipped with 200 ft. of ladders and used them now as the regular thing. *Igue de Gramouillat*, immense shake-hole, 100 ft. deep, 165 ft. pot at the bottom. *Abime de la Crousate*, passage to three pitches, 280 ft. total. Contains remains of an ancient gantry and bridge!

At the bottom of the *Gouffre de la Berrie*, 90 ft., a dead calf lay in water. The party drank from a clear spring lower down and were all poisoned, Martel worst of all, so much that he did not get over it for six months.

In September he went out to Greece and with Siderides visited basins of internal drainage in Peloponnesus. One of the swallets was forced 50 yards in spite of the horrible stink of decaying rubbish. Martel was seized with fever that night and could do nothing more. An unlucky season.

In 1892 Martel had 460 ft. of ladder in use, having become a complete convert. *Creux Percée* (Dijon), open pot, *glacière*, 180 ft. total. *Creux de Souci* (Puy de Dome), 108 ft., in lava. Carbon dioxide stopped each man a few feet from the bottom of the ladder.

Igue des Combettes, first pitch, 180 ft., total about 300. A roaring river was found and followed 200 yards down ten cascades. *Igue de Viazac*, no stream, first pitch 213 ft., total 508.

Aven de Vigne Close, five pitches, first two 180 and 150 ft. A classic example of the horrors of the relay system, six men being left at the top of the fifth vertical and three at points above. Fifty feet of ladder were taken off the bottom of the second pitch ladders, and let down over a pulley. Sixteen hours work the second day.

Grotte de St. Marcel d'Ardèche, surveyed and knocked down from six to two kilometres.

Far back on the uplands east of the famous rising Vaucluse, three smaller pots were done, and the colossal *Jean Nouveau*, a dead drop of 535 ft. Ladders were put over, but Armand and Martel were lowered on two ropes, practically together and very slowly by thirteen assistants. A small pit at the side which Martel refused has been done since, making 610 ft. total depth.

Among other caverns he revisited Bramabiau, three more traverses having followed his, and added 400 yards to the

labyrinth; while in Boundulaou, he used a boat, reaching the channel of the permanent rising.

1893 was Gaupillat's last campaign; so far he had been even the more active. The *Grotte de Miremont* was surveyed and found to add up to three miles. A short campaign only did the *Viazac* (508) again and the *Planagréze* (256).

The September visit to the Adelsberg (Postumia) cavern in Carniola beyond Trieste was a brilliant success. On the 15th the Antrona Club's voyage down the underground river, Tartarus to Ottok Cave, was repeated. On the 16th Martel with six others managed to do 800 yards down the Piuka from Ottok to a fork near Magdalenen Schacht. Many barrages were passed to a siphon, avoided by carrying the Osgood boat through tunnels in a boulder jam 200 yards; a hundred yards more voyage by 6 p.m. and turn back.

The Piuka next day was in flood at the Kleinhausel exit, while the branch from Zirknitz was so dry it could be followed, but so fearfully rough was the torrent bed only 500 yards could be covered in two hours.

Another day the Magdalenen Schacht was laddered, 70 ft. and 120 ft., and in spite of a rising flood on the Piuka, a short voyage upstream found the fork reached before. Martel had added 1,500 yards of river, doubling its known extent. On the 23rd he was taken by Marinitsch and others 1,150 yards down the gigantic cavern gorge of the Recca to cascade 20, beyond which more progress had been first made only on the 6th September.

His expenses so far had been borne officially but he went on in October at his own expense to Bosnia and Montenegro, showing the existence of no end of caves, but apart from notable progress alone in the *Grotte de la Rjeka* (Cettinje area) he could do nothing.

So far I have found no note of caves done in 1894, but Martel probably climbed in the Alps as in 1895 he published with Lorria *Massif de la Bernina*. This same year 1895 he attended a Geographical Congress in London to read a paper, and took the opportunity to make his famous British campaign, visiting first Peak Cavern and Speedwell, then going over to see the three subterranean rivers of Ireland mentioned in Kinahan's book, the Cladagh (Ulster), Cong, and Fergus

(Clare). Here he made the first exploration of the Marble Arch, the descent of Noon's Hole two pitches, and finished by surveying Mitchelstown New Cave. Then on 1st August he made the amazing descent of Gaping Gill (see *A.J.*, Vol. XVIII.), 270 ft. rope-ladder below 60 ft. of double rope, with a knot in the life-line, and his only experienced support his wife at the telephone, yet read his paper in London next day.

In 1894 Martel published that great work, literally so in weight and format, *Les Abimes*, and in 1897 *Irlande and Les Cavernes Anglaises* (in 1914 one of the only two books on Ireland in the Alpine Club library). There is no foundation for the legend that he did Sell Gill Hole, and no trace in his books that he attacked more than one Yorkshire pot-hole.

These varied experiences led Martel to a correct appreciation of the problems of the limestone. The rock covers or closely underlies two-thirds of France, thus the striking thing to remember is that the French shafts are commonly far distant from and at a great height above the risings, which deliver the water of great areas of thick limestone. In the pot-holer's sense they are dry or dead. The usual view of the day was that the fissured rocks contained *nappes* or sheets of water waiting to be tapped, that the Causses were carried on great rock pillars over great vaulted reservoirs.

Down the black precipices of the pot-holes, Martel reached in rare instances, definite streams at all sorts of levels, and found no water-table. In the "mere caverns" he followed water-courses, active or abandoned. First then the pots were no marks of underground rivers, second the stream courses were as definite as in the open air, third there was no filtering of water in its passage. Once poisoned the water burst forth *non potable*. The theories formed were confirmed as correct when he came to England and found our pot-holes very much alive, that is in course of erosion and corrosion by streams and seepage. It is interesting to note here that the French limestones are Jurassic, Oolitic and Liassic, ours are Carboniferous.

Martel's merciless cudgelling of out-worn theories must have offended many people. How much it was needed is shown by the recent very amusing outburst in England of the story

of great reservoirs in the limestone available for water supply. Still it is astonishing to find a responsible geologist as late as the dispute over the Perte du Rhone (1911) saying of him, "If men accustomed to stroll about in the yawning faults of some regions wish to see like phenomena everywhere that limestone exists, it is the finest demonstration of the pre-conceived character of their ideas." Yet at this late date Martel was an acknowledged authority.

Nevertheless a "geomorphologist" a few years before had also dismissed his work as "theories maintained by dilettantes of the exploration of caves." It is a matter of frequent note that any number of armchair pundits claim a voice of authority when it comes to things underground in the limestone. Not many years ago the Editor of the *Naturalist* told us that the Y.R.C. explorations had retarded progress (*Naturalist*, 1925, p. 223 and *Y.R.C.J.*, V., p. 236). Martel frequently complains that people underestimate the efforts exacted by work of any difficulty underground, and notes that he and his have been called, sporting hunters of stalactites (a libellous accusation!), excursionists, autodidactes, etc.

In 1896 came a short visit to the Pyrenees, but there was more important work done in the vast rock deserts of the Vercors, S.W. of Grenoble, and in the Devoluy to the S. In the great cave of Brudoux, he got forward by boat and ladder 400 metres upstream, and in 1899 to 750 m.

In 1897 *Aven Armand* was discovered, a magnificent great hall, 150 m. × 50 m. × 50 m., reached down a 264 foot pitch, with a floor sloping at 40° and carrying 500 leafy columns. On the Devoluy he descended *Chourum Clot*, and in 1899 discovered the colossal *Chourum Martin* which he descended 230 ft. after a week's work owing to the appalling stone avalanches and the clearing needed. *Chourum Martin* made a tremendous impression on his mind, frequently alluded to, and he believed its depth might be over 1,000 ft. Joly finally got down in 1929 and found it 190 m. or 623 ft. (accurate). An adjacent pot-hole higher up has recently been found to open into the same final chamber.

1899 also saw an expedition at Ministry expense to the pot-holes miles and miles away behind the famous rising of Vaucluse, yet connected with it. In *Grand Gérin*, 394 ft., a

rope jammed and broke, 100 ft. of ladder being lost, while another 60 ft. were lost in *Jean Laurent* (426).

A great epidemic broke out among the garrison of Lure in 1898, due to drinking water polluted by dead beasts thrown into pot-holes many miles back. The greater depth of the French pot-holes makes decomposition slower and more poisonous than in England, the conditions met with being often abominable. A tremendous fuss was made in the Chambers, and *Les Abimes* had been read. Martel was quoted as an authority by Ministers in debate and his work alluded to as "revelations." By this time his brilliant services to public health had given him an outstanding position.

A Ministerial circular of 1900 required every water scheme to be submitted to a commission of a chemist, a geologist, and a bacteriologist. The assurance of legislation was fulfilled by the law of 1902, prescribing perimeters of protection round water intakes and forbidding the throwing of dead animals into swallets and chasms. The latter has not been enforced since 1918 and the country people to-day consistently ignore it.

In the next five years Martel paid two visits to the Pyrenees making a plan of Bétharram, 3½ km., and an official tour for the Russian Government on the S. side of the Caucasus to compare the Black Sea coast with the Riviera led to the appearance in 1909 of *Cote d'Azur Russe*.

From 1904 to 1915 he was joint Editor of *La Nature*, and from 1905 to 1914 he with his brother-in-law, the geologist De Launay, was regularly employed on official missions by the Ministry of Agriculture and as a member of its Committee of Scientific Studies, chiefly on water supply and reservoirs for industrial purposes. Owing to the vast extent and thickness of the limestone, the problems of source and effect are much vaster and more puzzling than in Britain.

One traces 1905 as again a campaign in the grand manner, fifteen descents above Vaucluse, four above 80 m. (260 ft.), and the sensational descent of the Great Canyon of the Verdon, "the most American of the canyons of France." Next year he did it upstream and also two much shorter magnificent *clues*. In November he came to Leeds and lectured to the Y.R.C., as printed in Vol. II., being then made Honorary Member.

A campaign in the Pyrenees in 1907 at his own expense was

followed by extensive official investigations during the next two summers, four months' work resulting in 150 plans. *Gouffre de Barranc* (260 ft.) seems the deepest pot done, and the formidable underground river Bouiche was forced upstream beyond 250 metres to nearly 1,600 by using boats until they were too damaged to continue. A determined attempt was made by Fournier to descend the canyon of Olhadibie, and another upwards in 1909, led by Martel, without being able to pass two terrific falls.

At the end of this came the decoration, Officer of the Legion d'Honneur.

In the Jura, 1910, was made with Fournier the classic experiment with fluorescein, when 2 cwt. was put into a leak in the bank of the Doubs to come out days later at the rising, La Luire, many miles away. In Padirac Martel pushed on in 27 hours to 2,090 metres. *Les Cavernes de Belgique* was published the same year.

Next came official enquiry into questions of water supply to Toulon, and the first careful study and plan of the Rhone below Bellegarde, relative to wild cat schemes of flooding it by a huge dam. It will be news to most of us that the Rhone here narrows to 5½ feet, emphasizing the craze in France for industrial barrages holding up quite trifling quantities of water due to the difficulty of finding the type of site we in England think fit for a reservoir.

In 1912 Martel went to the U.S.A. and visited the Colorado Canyon and the Mammoth Cave where he made very unpopular reduced estimates of its great length.

Armand, his great supporter died in 1921, the year of publication of the great volume *Nouveau Traité des Eaux Souterraines*. This was followed by *Causses et Gorges de Tarn* (1926) and by *La France Ignorée* (1928, 1930), a work which has drawn attention to innumerable remarkable things and to which many places in France must be deeply indebted for solid business reasons. To the great services Martel had rendered to the poor communities of the Causses and Tarn by the developments which followed his discoveries and writings a remarkable testimony is given by the unveiling in his lifetime of a statue, with plaque of Armand below, at the junction of the Tarn and Jonte. This day in 1927 he was promoted Commander of the

Legion of Honour, but unhappily a few days later Gabriel Gaupillat died, his cousin, and comrade of six glorious years, 1928-31, Martel was President of the Société de Géographie.

Of predecessors in the 18th century he had three, one of them Lloyd at Eldon Hole; 19th century pot-holing begins with the remarkable excavations of Lindner in the Abisso de Trebiciano, which took him down to 1,056 ft. to water now judged to be the Recca. Then came the interlude of the work of Birkbeck in Craven (1848) and of Schmidl in the Adelsberg cavern in Istria. The resumption of work in the latter area was in hand when Martel gave it a great impulse by his visit in 1893, and the Y.R.C. had just begun work in England when Martel came over in 1895 to descend Gaping Gill.

Martel opened a new chapter in geology by laying down the laws of underground flow in fissured rocks, destroying the idea of water levels in such rocks and substituting the idea of independent water-courses as on the surface. Limestone is of course the principal such rock but he also proved chalk to be of the same character, except where it is in a fragmentary state. He never failed to castigate the theory that great reservoirs exist in solid rock. To-day engineers have learned at last that no limestone can be trusted not to be fissured. That the formation of stalactites ranges from very slow to very rapid was another of his unpopular views.

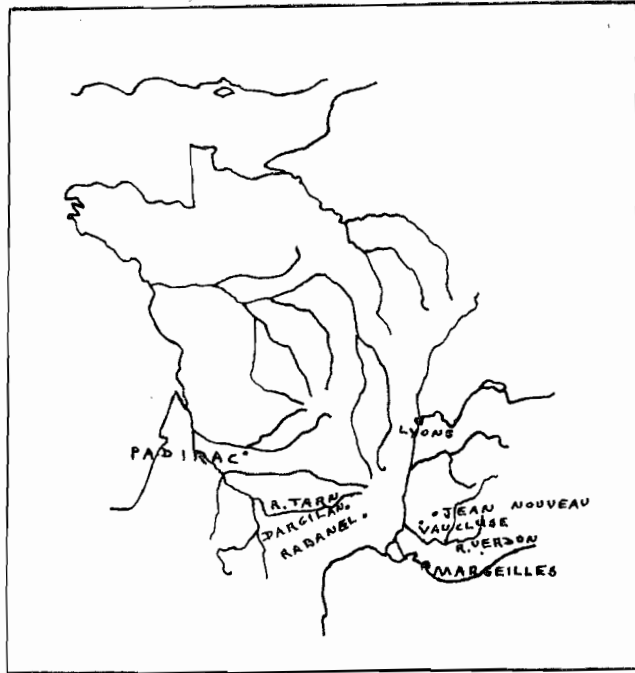
He was of course a firm believer in the relatively protective character of snow and glacier, compared with the powerful excavating tools of frost erosion and glacier torrent, in other words he insisted that glacial action is a highly complex and not a simple affair.

In France with its immense thickness of limestones and its far-stretching limestone plateaux the pot-holes are for the most part dry, and my impression is that bedding-planes are an unimportant feature in comparison with the joints. Remember that Martel writes of bedding-planes as *joints* and of our joints as *diaclasses*.

A most refreshing thing about his writings is the trenchant attacks on fantastic technical terms, bad Latin and worse Greek, useless neologisms. He lays it down that new words should be invented only for new phenomena. With the

hokum and obscurity of third rate science he had no patience. Modern geography suffers severely at his hands. With its emphasis on the U & V valley idea, one glacial erosion, the other water erosion, he did not agree, first because he put down the U & V shapes to the rock, and second because there is every gradation between.

Full of years and honour Martel died in June, 1938. Great as were his services to tourism let us not for a moment allow the gratitude of the natives of the Causses, Verdon or Pyrenees to distract our view of him as a great geographer and explorer. Greatest of all in the underground world, to all pot-holers he was "The Master."



POT-HOLE FRANCE



Photo by the Late J. A. Farrer
MARTEL GOING DOWN GAPING GILL
(1895)



SELL GILL PARTY (1897)
(—, —, Calvert, Lund, Gray, Ellet, Slingsby, Mason)

SOME MOUNTAINS OF THE CAPE PROVINCE.

By N. P. ELLIOTT.

The kindly providence which looks after the life of poor Jack must have smiled to itself when, at the end of 1943, it decided that the R.N. Air Station at Wingfield, six miles from Table Mountain should be my abiding place for the next two years. I was, indeed, so fortunate as to know my destination, but my ignorance of the terrain of the Cape Province was so complete that I blush for it to this day. My mind retained its childish impression of a photograph of Table Mountain sent home by an uncle, a mountain with a long flat top not unlike, but surely not as interesting, as Ingleborough ; and the veld had kopjies on it, but these were only little flat-topped hills !

The Drakensberg ? Yes, but that was a long way off, nor did I, in fact, do more than see its great peaks from a distance. That the majority of my fellow members are probably little more enlightened is the reason for this endeavour to convey some impression of the magnificent country in which I found myself. Their ears, at least, will not burn when this confession is read by my friends of the Mountain Club of South Africa ; I can assure them that mine will.

What sort of country I had come to first dawned on me when, coming by train from Simonstown, I saw the eastern side of Table Mountain and Devil's Peak, great crags, scarred with gullies and, from this view, at once apprehended the nature of the peaks seen from the other side of the train across False Bay, peaks which were to form my familiar skyline.

Table Mountain itself is faced with an upper wall of rock, for the most part well over a thousand feet in height and broken by the great cleft of the Plattsklip Gorge. The western side, flanked by the sea, is formed by the buttresses called the Twelve Apostles. The Table itself is relatively narrow, widening towards the eastern end. There are on the mountain over 150 routes, some no more than a walk, but many of them of great severity, particularly on the exposed face overlooking Cape Town. Access is easy and the foot of most of the climbs can be reached within an hour from Cape Town. The rock is

a hard, reliable and rough sandstone, usually terraced, sometimes by a narrow ledge, sometimes by a steep slope which may have minor steps upon it. The major steps are commonly very steep, say 80°, and the general formation has led to the practice of the leader taking out all the rope and the end being thrown down to the third man, a practice which seems odd at first but which appears to be the best under the conditions. Very little scree is apparent, partly, I presume, due to the infrequency of frosts and partly to the vegetation; of the latter, I may remark that bush is far superior to scree as a delaying agent. To these attractions is added an almost perfect climate whose daily weather is easily predictable, a long summer in which rain is rare but whose heat is usually tempered by a cool wind, a short spring and autumn and a winter wet, particularly at weekends. Therein lies the imperfection; rain by all means, a most necessary thing, but why at weekends? If I were to add a dissertation on the pleasures of climbing on warm, clean rock, I might at some time be held responsible for the formation of a Society of Yorkshiremen within the Mountain Club.

In the space between the breakdown of the veld and the coast are mountain ranges too numerous to mention, and so prolific of peaks are they that twins are common and there is at least one case of triplets. In the Western Province they vary in height between the Helderberg (3,750 ft.) and the Klein Zwartbergen, the highest of which is 7,880 ft. They vary in accessibility too, but with leave and motor transport available I could have climbed a fresh peak every weekend. There is an added attraction in that no detailed maps are available; we frequently had to make our own routes, and many of these mountains are very well defended. I think I am quite safe in saying that there are still some first ascents to be made, certainly many fresh routes.

My opportunities were, of course, limited but an account of six days at the end of September, 1944, which Heath of the Sheffield Climbing Club and I spent in the Waaihoek area may serve as an illustration of the country. Neither of us had been in the district before, though Heath had seen some of the peaks from a neighbouring group. We were fortunate enough to get a rough sketch map from the Mountain Club, but it was

lacking in detail and, indeed, one peak which we climbed was omitted altogether and it was not until several months afterwards that we were able to get it identified.

It was our intention to use a hut on the slopes of the Waaihoek Peak and we took with us enough food to last six days (mostly such stuff as bacon, biltong and dried fruit, eschewing tins in order to save weight. In spite of that I remember that when we started I thought my sack was rather more than I could carry any distance. We arrived at Breë Rivier Station at 1.40 a.m. and as it had been raining recently, slept the rest of the night on the floor of the waiting room.

The bottom of the valley there is almost flat, about six miles wide, with scattered farms and coloured labourers' dwellings. Not anticipating that we had anything but an easy day in front of us, we made no haste, but collected wood from the roadside and cooked breakfast just outside the station. We trudged along a long flat road, calling at a store to complete our provisions. We knew no Afrikaans but the storekeeper was very friendly and concluded our transactions by giving us a cup of tea.

Our loads now made up we went on through several farms until we reached the foot of the hills. Here, the farmer gave us directions, as to how our path started. These were very necessary. Heath had a very rough sketch of our route drawn on the back of the usual envelope, but it only gave the track and very little clue as to how it fitted into its surroundings. By this time I was experiencing an uneasiness of the interior which, combined with my heavy sack, made progress even on the level very trying and so we halted a little beyond the farm and made a fire and a meal and finally started, at 2.20 p.m., the uphill part of our journey. It was about this time that I learnt that the hut for which we were making was on the other side of the ridge. As I doubted if I could get myself, let alone my sack, up to the ridge that day, the addition of the crossing seemed quite immaterial. However, we fitted together the farmer's instructions, the sketch map and what appeared to be the most feasible route and pushed off through the bush towards our first land mark, a solitary pine tree towards the head of a long ridge covered in low scrub.

By the time I reached this I was at my worst, having to halt every few hundred yards to get my wind back and let my heart steady down. After this I was to improve until I finally reached the top of the 5,400 ft. ridge in as good condition as I could normally expect. From beyond the tree we looked across a little valley to our right and above the stream saw, for the first time, our path well defined. Following this we traversed upwards, and still to our right, until we came to a waterfall in a large shallow gully. Here Heath, who had gone on ahead, had made coffee and we sat over a meal for nearly an hour. At six o'clock we decided that our chance of getting across in daylight was quite good enough and I went on, crossing above the waterfall and then straight up the gully over broken rock and sodden turf, the latter very steep in places, until the gully widened out into a triangular grassy slope, half covered with snow. Here Heath caught me up and we flogged our way up this unpleasant stretch together. At the head of this the cairns which marked the track, itself hidden by snow, petered out. The daylight, too, had gone and we scrambled up the last few hundred feet, a shallow rocky groove, by the light of a half moon. This brought us to the most welcome sight of the day, the hut, a small dark object outlined against the snow. Tired as we were we could still appreciate the gleam of the snow slopes below us, and the snow streaked peaks beyond, looking almost incredibly beautiful in the moonlight.

We plunged down the few hundred feet into the little valley, crossed a snow covered beck, hidden until I put one leg into it, and up the spur on which the hut stands. We had been fortunate with the weather, for the tops, which had been touched with cloud all day, had cleared and we had seen the sun set beyond a valley filled with mist. Thereafter I sat feeling the utter irresponsibility which comes with fatigue while Heath made coffee. The hut is a small one but well equipped with blankets and we laid some of these out and changed our clothes, caked with snow and sweat. I lay and drank hot sweet coffee and I have a dim recollection of Heath solacing himself with bread and honey.

We woke to a brilliant morning and realised that our lofty valley was filled with snow of the sort on which one might

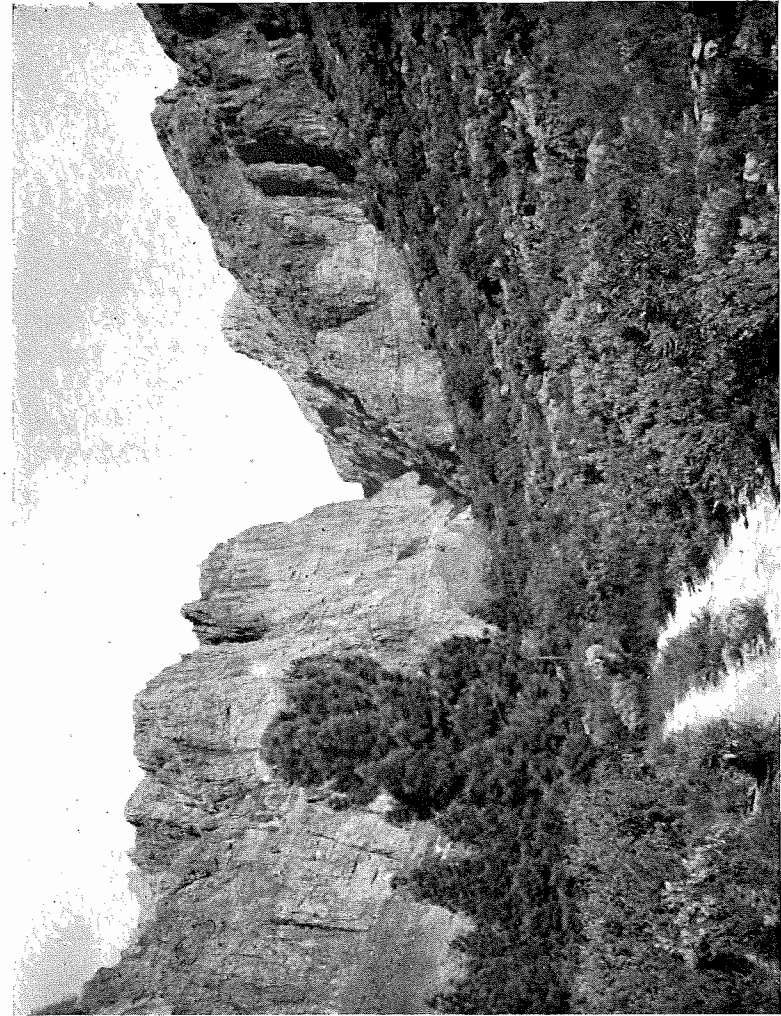


Photo by R. G. Taylor

DONKER KLOOF AND HAALHOEK SPUITZ
(KLEIN DRAKENSTEIN)

ski. I potted about while Heath in the intervals of cooking breakfast, the sort which will be served in heaven (may I be there to eat it!) got skis down from the loft and examined them with loving care. So, while I washed up, I persuaded him to go outside, where he slithered about joyfully on the slopes near by. We didn't hurry over anything, went up a few hundred feet on ski and walked across to a ridge whence we could admire the Buffels Hoek group and then up to try to catch a sight of the Waaihoek Peak and prospect a route suitable for skis. This we found, and, after lunch, set off and, climbing a subsidiary peak on the way, reached the top (6,408 ft.). The snow was hard and the strong sun had made it into the large crystals which are not easy to run on. Nevertheless we came down through rocks and across little becks with few falls and great enjoyment. This ski-ing was an altogether uncovenanted blessing and so the more appreciated. The evening in the dimly lit hut passed quickly, as time does in good company. It was prolonged by bad in the shape of a rat or so, but the relative importance of sleep became paramount and, having made all as secure as we could, we just slept, rats or no rats.

In the morning we had hoped to climb Mount Superior (6,400 ft.) on skis but a little inspection put this out of consideration; the hot sun had done its work too well and we returned to our practice slopes above the hut. Knowing that it would probably be our last chance for a few years we made the most of it and flattered ourselves that we had regained some part of our former skill. The hut was a pleasant place that evening, with the sun going down behind the ridge, its light remaining on the top of Mount Superior and Tuesday Peak, and a little cold wind blowing down from our pass and later with the moon to show the surrounding peaks in all their alpine austerity. Probably I know more beautiful places but this is one where like John Splendid, "Many a time the ghost of me will be standing here, remembering."

The following day Heath found some snow still left to ski on while I spent the morning collecting firewood and trying to sort out the tangle of mountains from a ridge to the east of the hut. It was very hot and neither of us was inclined to do a great deal, but in the afternoon we set off

towards Mount Superior to extend our knowledge of the country. We traversed a ridge which forms a connecting link between Zebasberg and Superior. It has three peaks at a height approaching 6,000 ft., apparently unnamed, although there is a cairn on the highest. They are composed of light grey rock, very rough, and have a large number of small fantastically shaped pinnacles. It was quite an interesting scramble and we had views down into the Waaihoek Kloof and Wit Els Kloof and of the ridge running down to the Roodeberg from Zebasberg. This also has a number of pinnacles on it, some of which would have to be turned if the ridge were to be traversed. We did consider it as a return route but I doubt if it would have been worth taking. If we had allowed two days for it, one might have been wasted, and if we had left one and, as was quite possible, taken two, I should have been in the rattle for overstaying my leave. The kloofs are a remarkable feature of these mountains, many of them of tremendous depth, as much as 4,000 ft. and quite impassable, with huge waterfalls and thick bush.

We were repaid for our laziness the next day by finding ourselves wrapped in thick cloud but in the afternoon, tired of waiting for it to clear, we climbed Zebasberg (5,660 ft.). It was about $1\frac{1}{2}$ miles from us and by the time we had traversed several minor peaks and reached the top we were of the opinion that its height was underestimated. We had some wonderful views on the way down, on our left overlooking Breë Rivier and on our right seeing over the Ridge Pinnacles to Horseshoe Peak with Cleft Peak behind it, Horseshoe Ridge Peak, and Mount Brodie, all these light grey, with the sun on them, except for the dark streak of an enormous gully on Horseshoe. Some way beyond these was Trident with red crags, and blue sky above them. The nearer peaks had over them a long level of grey cloud. This remained on the top of Buffels Hoek Peak and Sentinel, but beyond them we could see over the Ceres Plain, in the sun, big patches of bright green and brown fields with white farm houses, very small in the distance. The sun just caught the upper rocks of Bertsberg, which appeared golden against the dark shadows below. In that direction the deep cut gap of the kloof running down into the Waaihoek Basin made an impressive foreground.

On the Breë Rivier side we saw down the gullies, between the lower peaks, the rock walls which face that way, some of them well over a thousand feet high, with wicked-looking overhangs in places. The rock itself is dark-coloured, rough and usually quite sound. We saw two hares on the peak and there is evidently quite a lot of vegetation there in the spring.

The weather cleared that night and Monday came fine with hardly more than enough wind to make it decently cool for climbing. We traversed the side of the ridge which forms a connecting link between Zebasberg and Superior, crossed a small kloof and came on the ridge between Superior and Tuesday Peak. From this, we had our first view over into Jan du Toit's Kloof. We traversed over the top of Mount Superior, until we came to the branch leading to the summit of Windsor Peak which projects into the kloof in an easterly direction. A descent of a few hundred feet and a short scramble brought us to the top of Windsor.

Here we had our lunch, identifying the while, partly from Heath's recollection and partly from the map, the peaks around us. Apart from this we hardly exchanged a word, having far too much to look at. Opposite us was Horseshoe Peak with the great pile of the Woolworth Building on its west side, not more than two miles away and looking much less in the clear air. How deep the gap which separated us is I don't know; the sides of the mountains disappear into apparently bottomless depths but it is probably 3-4,000 ft. After this we retreated to a more sheltered place in which to smoke a pipe, and again in silence.

We had intended to climb Tuesday Peak, but having returned on the western side of the main ridge to avoid the difficulty of picking our way among the broken rocks on the crest, we found ourselves cut off from it by a kloof and having already been nearly to the top we left it. Perhaps we ought to have gone back just to say that we had climbed another peak but we still had the tremendous views of Waaihoek Kloof and the ridge coming down from Zebasberg to occupy our minds and it did not seem important. Thereafter in the face of a wind increasing in strength and decreasing the temperature we came to the pleasant green *vlakke* on the watershed between the Waaihoek Kloof and the Waaihoek Basin and once more

traversed the slopes of the ridge back to the hut.

Our return was made on a rather doubtful morning with occasional small rain squalls. We tidied up the hut for the last time and cleaned ourselves for civilisation. I sacrificed the makings of a good beard but without much regret. There was no particular hurry and we did not leave until 10.40. My rucksack still seemed fairly heavy though it compared favourably with the load I had carried up. Looking back from the ridge the hut had disappeared in mist. We travelled quite well going down and had made about 1,000 ft. before the rain came. However, we reached the farm at 12.20 and set off down the road, our heels sinking into the soft sandy surface as we walked. The rain stopped just before we reached the station and we had just time to change into dry clothes. (It was a memorable leave in magnificent country and had as well provided a welcome relief from living in a crowd, as we saw no one else for six days.)

We had a number of weekends climbing in somewhat similar country nearer to Cape Town and, with Penrose, I had a few days in the Klein Swartberge. In general we were somewhat hampered by lack of equipment, for instance the only nails obtainable were round steel hobs, and our time was usually limited, but the climbing was always interesting and enjoyable, and the friends with whom I climbed good company, so that my recollections of South Africa are of a kind that I shall treasure for many years to come.

A NOTE ON THE THEBAN HILLS.

By the late W. E. EVANS.

About 400 miles up the Nile from Cairo lies the site of the ancient city of Thebes, for hundreds of years the capital of Egypt. In its prosperous days it covered a large area on both banks of the river. The more obvious remains of it to-day are, on the east bank, the great temples of Karnak to the north and Luxor to the south, with the typically unlovely town of Luxor in attendance, largely dependent on the tourist trade; and on the west bank, the mortuary temples of Rameses II and III, certain other ancient remains, and an unsavoury collection of mud-huts occupied by the peasantry. Almost from the western edge of the irrigation belt of the Nile rises the steep escarpment of the Theban hills, amongst which were buried the kings and the courtiers from about 1600 B.C. for the next 500 years. As they worshipped the sun-god, Amen-Ra, in the east, so were they buried with him in the west. And they were buried in magnificence, not only in the gilded monuments of their tombs, but in the grand setting of the everlasting hills.

I find it tempting to fall into superlatives about these hills, perhaps on account of a year spent out of sight of anything worthy the name. To begin with, then, a few facts. They rise in a steep, eastward-facing escarpment, little more than 1,000 feet in height, to a level plateau stretching westwards as far as can be seen, and featureless except for the deep and tortuous indentations made into it by the dry, steep-sided *wadis* running down to the Nile flats. The rock is limestone, of a deep ochre, almost unvarying in colour; the whole area is dry and utterly devoid of life, save for a few choughs which squawk their way around the cliffs. In what then lies their appeal? There is a fascination about the dry places of the earth, and added to that here there is line and form to fashion rock scenery unequalled by anything that I know on a comparable scale.

Although in some places, notably behind the Temple of Queen Hatshepsut, the scarp face rises in one great cliff almost to the full height of the plateau. It is more generally terraced, and this is especially marked in the indenting *wadis*. The

different terraces, at intervals of about 300-400 feet, probably mark sea-levels at progressive geological periods, while the natural sculpture which characterises the cliffs may be the result of sea erosion. Certainly, throughout the hills, are to be found such profusion of fossils as I have not seen elsewhere. Mussels, sea-urchins and other crustaceans, complete and perfect in form and detail, abound and require no seeking.

Each terrace is separated from the next by perpendicular cliffs, eroded into giant pillars, standing rocks, hanging galleries, and countless strange shapes to make these fitting valleys of the dead. A curious circumstance which I am quite unable to explain, but of which I made good use, is that the terrace edges, and the slopes of rubble which lie against the upper cliffs, are honeycombed with paths. Who made them, when and why, is a mystery to me. They are not animal tracks, for there are no animals here, and besides, an occasional cairn was to be found beside them. There has been much tentative excavation in the hills, for archaeological reasons or purely for plunder, but this seems an inadequate reason for so many seemingly aimless tracks. Again there are frequent lodes of calcite, many fairly pure and occurring in remarkably large and well-formed crystal masses, but these, when found and unearthed, are often left to lie. Perhaps other and more marketable minerals are found, or suspected; I do not know, but the paths are there, and they led me round great amphitheatres of towering rock. At one moment I faced a cliff where the chiselling of nature bore an uncanny resemblance to the hieroglyphics and reliefs I had seen in the tombs and temples below. At a turn of the path is seen in profile a great rock standing sentinel to its parent cliff, its sun-baked rich ochre a perfect contrast against the cobalt sky. And so on, for a mile of exposed ledges, across narrow rifts and around savage gullies, from one fantastic rock formation to another, until a boulder slope gives access to the next terrace.

Hoping to find a way past the ramparts of the highest cliffs to the tableland above, I scrambled up the bed of a gully full of large blocks. It led me into a water-worn bowl whose further side was a smooth undercut wall, thirty feet high, above which the gully continued under a great Gothic

arch to a narrow slit against the sky, whence came a shaft of sunlight making a glowing shield of rock to light the cool shadows of the cleft. There are many such gullies carrying clear evidence of water-erosion, and it can only be that, on the rare occasions when rain falls here, they become roaring torrents.

I have said how appropriate a dwelling-place for the departed these hills appear to be. It seems to me also that the juxtaposition of the great temples is not fortuitous. In these hills I have seen pyramid and pylon, sphinx with his characteristic forward-stretching paws, columns with their varied capitals, indeed the counterpart magnified ten-fold of every architectural feature of the great buildings of the plains below. I am convinced that the men who wrought the Theban temples gained their inspiration from the hills.

ROUTE Z—BRIG TO GRINDELWALD.

By the late W. E. EVANS.

This route does not appear in Ball's Guide, probably because it so teems with climbs and expeditions throughout its length that even his condensed style could hardly compress it into manageable proportions. On the framework of this journey could be built a guide to the whole central part of the Bernese Oberland.

Bel Alp, from whence the evening scene embraces the twinkling lights of Brig as well as the afterglow on the Pennine summits, has virtues, even on wet days, which are as yet unsung. If you have a taste for economic problems, you may consider why food and drink at the top of Snowdon cost 3.7 times as much as the equivalent articles at Bel Alp, which is twice the height and served by a mule instead of a railway. If your interests are mechanical you may suffer Reed's fate when he examined the obscure workings of the dinner bell—a shout of laughter from the *bonne femme* and “You are *ingénieur*, and you do not know how it works!”

There is much to be said for luxury at 7,000 ft., and the hotel has “many noble wild prospects.” One of these is the Füssshorner, a sort of concentrated and straightened Coolin

ridge. For the summit peak at the north end, three guide-books gave three routes; ours may be described as "Variations on an Original Theme." In thick mist, punctuated with driving snow, the west ridge, the south-west ridge, and sundry snow-slopes and couloirs were used and rejected as they became too unpleasant, and we reached the top by means of moving always in an upward direction, a simple procedure which does not always produce the desired result. It once failed me badly on Ingleborough.

The hour was late, and a more rapid descent by the snow was advisable. A stiff breeze now whipped the snow off the couloir, and we were equally blind with or without goggles, so the reverse principle of always proceeding downwards was applied, and we kicked steps vigorously for an hour. This brought its reward, and ten glorious minutes of glissading trebled our progress and brought us within sight of the Ober Aletsch glacier. Easy rock, easy grass, steep grass, and much too steep rock followed, and speed accordingly decreased. It was absurd, but there was the moraine path, and there were we, a hundred unclimbable feet above it. The weather was foul, the light failing. Something had to be done, and Reed and I prepared to abseil. Our position was desperate. Sale, for once, was unhelpful. He sat below, steadily consuming the last of the chocolate, having long since walked off by a grass ledge.

Tea fit for drinking and rock for climbing are hard to come by on the continent, but every year one seems to make the mistake of trying them once again. But now it was time for serious climbing, and accordingly the party went into committee to produce a grocery list for a stay at the Ober Aletsch hut. I had been smitten by a violent cold, and my contributions were limited to destructive criticism and gloomy predictions about the weather. The list was to represent food for two men for one day, and it was agreed that if I were sufficiently recovered on the morrow to be capable of multiplying by three, I should perform this operation, load the result on to a porter and join Sale and Reed at the hut. They departed, and the next morning I approached the landlord with my list. He was staggered. He pointed out that the bread would be inedible before we could eat it, and reduced

the amount by half. I yielded and hit back by ordering a large quantity of biscuits. Nevertheless, I was shaken, and looked up Scott's sledging ration (I was reading Cherry Garrard's *Worst Journey in the World*). It was clear that we had enough food for a week. The calculation had taken some time, however; the food was collected and the porter bespoke, so I put on a bold face and went through with it. The considerable remains were smuggled back into the hotel on our return, and the final remnants abandoned at the Bergli hut six days later. I announce with pride the discovery that a man, even with Alpine appetite, does not eat 6 lbs. of food per day. Nevertheless, Sale was wrong when he said, "Half a pound is a lot of jam even when it's marmalade."

After a day of changeable weather which had restricted the advance party's activities, I arrived at the Ober Aletsch hut in time to see the bold pyramid of the Nesthorn outlined against the western sky, its flanks and ridges veiled in brilliantly-lit cloud whose movement and changing colours made an evening pageant of unforgettable beauty.

The route to the summit lies up the Beichfirn, the western branch of the Ober Aletsch glacier, and an hour's march the next morning brought us to the foot of the ice-fall between the rocky east ridge of the Nesthorn and the Lonzahorner. Three rock ridges divide the ice-fall into four couloirs, of which it is usual to take the first or second from the left. These, however, appeared to be the most broken and difficult, and the tracks of a previous party could be seen ascending the third from the left, which we decided to follow. Whether we were right or no, it took nearly four hours of zig-zagging through crevasses, and under séracs, and testing snow bridges to reach the comparatively level névé of the Gredetschjoch, below the summit ridge. They were hours of hard plodding in new snow, relieved by halts for which the view of the Aletschhorn and of the snow-clad spire of the Schienhorn behind us were sufficient excuse. Nor did we lack excitement. More than once the leader's axe sank to the head, while the tinkling of ice particles in the blue depths of a crevasse persisted for ominous seconds. The angle steepened until it was necessary to cut steps in the ice beneath the snow covering, and eventual success was always a little uncertain until the

last sérac was left behind, thus adding that spice to physical effort which goes to make a first-rate climb.

From the pass, hard snow ridges over the Klein Nesthorn and up to the summit gave eighty minutes of exhilarating labour in brilliant sunshine, followed by much clicking of cameras. The Alps were on show. The splendid mass of the Bietschorn dominated the western view; to the south the cloud carpet was pierced by all the snow peaks of the Pennines and beyond, and a pale bulge on the horizon could only be Mont Blanc, 60 miles away.

The descent by the same route was enlivened by the thought of what the mid-day sun had done to the new snow on the ice-fall. It is sufficient to state that continuous care was necessary, that only once did the surface peel off from below us, and disappear significantly into a crevasse, and that the leader inspired confidence.

Two days later we descended for the last time the zig-zags from Bel Alp to the glacier, that steep path which comes as a penance at the end of a long day for all the mountaineering sins you have committed, and by which you acquire merit, and your dinner. Whether you climb from Bel Alp, the Rieder Alp, the Ober Aletsch or the Concordia Huts, your fate is the same, a stiff pull-up at the end of the day, and it is never quite so bad as your imagination during the last hour's trudge down the glacier has made it. The approach to the Bergli hut, on the other hand, requires care lest you arrive, like Father Christmas, down the chimney.

When we set off for the Concordia it was one of those mornings, not unusual in the Alps, which yet demands a mention and some attempted tribute. Everything is still, and fresh, and light; the world has indeed been born again, and you with it. Across flowered pastures, up desolate moraines beside the toppling many-hued séracs of the lower ice-fall, and then we set foot upon the high-road of the level glacier. Seldom was backward glance so rewarded as here. The frozen waves diminished and fell away to the gorge from whence sprang up the rocky, tree-clad buttresses, dappled with the shadow of mounting cumulus, while between them, in the far distance, the Mischabel, the Matterhorn and the Weisshorn raised their silver heads against the azure sky.

High-road, I have called it, yet never was a road so pot-holed or gave the traveller upon it so devious and undulating a route as this one, nor one so packed with interest and delights. In its changing detail of form and colour it is extravagant; its setting is magnificent, and its layout majestic. Two conspicuous breaks in its retaining walls of rock and snow ridges occur. First, on the west, the gap by which the Mittel Aletsch glacier joins the main stream reveals a fresh aspect of the shapely pyramid of the Aletschhorn. Then, on the eastern margin, the hills give way to form the hollow filled by the blue water of the Marjelensee, that astonishing lake with its glacier wall and doll's house ice-bergs, where seeing is not quite believing, and photography is no use at all. We sat, we marvelled, and we moved on.

The last stage of this journey was easy going up the now less broken glacier, to a mounting climax of sensation as the peaks which fringe the shining carpet of the Concordia Platz, came into view, took form and place. At last we mounted the rickety ladders to the Concordia Hut, staked a claim to bunks amidst a babel of tongues and an atmosphere of steam and shot out again to that other world of blinding light. White clouds were boiling up from the Jungfrauoch, their shadows making a shifting mosaic of the glistening snowfield below. Turning to the south, the scene had a more permanent quality. Form took precedence over light. There is an inspiring rhythm in the lordly sweep of the great glacier to its destination. Here, you feel tempted to say, is perfection and unalterable.

The next day was spent in reaching the Bergli hut by the Ober Mönchjoch, with an ascent of the Mönch as diversion. All went according to plan, from the dull grey start, when the sky, the snow and the brain are all grey; through the ever-recurrent miracle of dawn on the glacier, when life returns to the mind and body as the sun gilds the peaks; through the exhilaration of a successful ascent, and finally to the delicious rest in a warm and fuggy, and this time almost deserted, hut.

We climbed the Mönch by the ordinary route from the Ober Mönchjoch. This may by all accounts be difficult and exacting if steps have to be cut up the long steep arete. For us there was a well-trodden staircase, and the difficulties lay

only in putting one foot above the other, but with all the beauty of the Oberland unfolding as we mounted higher, there was nothing tedious about this ascent. Anyhow, it was the highest that any of us had reached. Possibly we had the air of intrepid adventurers as we started to descend, but our pride was dealt a mortal blow by an encounter with a crocodile of boys and girls equipped with shorts and walking-sticks, a bored guide at head, and tail, making a half-holiday excursion from the Jungfrauoch of what we had considered quite a climb. I felt uncommonly like Tartarin in the Alps.

I have spoken of the approach to the Bergli Hut, which must occupy the only horizontal spot for miles around. A twelve-hour stay there is not sufficient to overcome the sensation of astonishment at its existence, and even less of its continued survival, and it must be the devil and all of a place to get away from in bad weather. Its situation can be best appreciated in the early morning. As we stood that morning on the airy balcony, itself suspended over space, a tiny verdant patch of valley, 7,000 feet below, could be seen. On the left, this was cut off by the great frost-riven south wall of the Eiger, silent now, its avalanches not yet released from the grip of night. Above and all about us, the steep ice-fall of the Grindelwald glacier made a white and threatening chaos, innocent yet of the subaqueous hues which are born of the sun, still hidden behind the huge mass of the Schreckhorn which rose up in front, black, vertical, and forbidding. In the pale blue sky flew two flaming banners of cloud.

Somebody said it was time to move, and we picked a careful way down the glacier, before swinging into the long hot descent down the path that ended in the oven called Grindelwald, and so to a large dinner, soft beds, and trains for home.

It was a good time, yet we might have travelled from England only to see from Belalp the Mischabel peaks shine like a golden throne in the evening sky, to see the gold turned by the setting sun to rose colour and the last hues to drain away as the silver shadows crept upwards; we might have gone only to see that, and come back content.

OMUL: OR "GETTING FIT FOR WAR."

By H. G. WATTS.

In August 1939, I was sent to Roumania as a member of a small Military Mission. There were five of us, and we had to carry out a reconnaissance of the oil wells and refineries round Ploesti. It was thought that the Germans would try to grab them as soon as they had settled Poland. Had Russia not stepped in and seized the common frontier that is undoubtedly what they would have done. We wanted to be in a position to put them out of action first, but the war hung fire for so long that nothing could be done about it in the end. We stayed in Roumania till October 1940, waiting for something to happen, and were finally withdrawn rather hurriedly while the German Army was marching down the Prahova Valley to Ploesti.

Life was very pleasant in Roumania. Bucharest was gay and cheap; you could entertain half a dozen friends to a seven-course dinner with cocktails, wines and Napoleon brandy, at Capsa, the "Monseigneur" of Roumania, for £3 10s. all in.

In spite of all the counter attractions we worked hard, and at the week ends we kept ourselves "fit for war,"—in other words we worked off the liver acquired during the week. Still, we never forgot that we might one day have to swim the Danube to Bulgaria. So on Saturdays we shot off up the King's Road (the only decent one in the country) to Sinaia and the mountains.

My introduction to the Carpathians was on 14th October, 1939, when Taffy Wilson, with whom I was staying, came in at lunch time and announced that Monday, the 16th, would be a public holiday in honour of King Carol's birthday, and wouldn't it be a good idea to go to the mountains and get three weeks' smoke and *tsuica* out of the system. (*Tsuica* is a rather unpleasant raw spirit made from pears or plums, and much favoured in those parts.)

We went in to Wilson's car to Sinaia, a mountain resort, rather smart, in time to play golf on Saturday afternoon. The king had a country house there, and Madame Lupescu a villa, in which she spent a good deal of her time. There is a

casino. I bought the best pair of ski-boots I have ever had, beautiful soft leather, and big enough to take three pairs of socks, for 1,500 Lei (2,000 Lei to the pound sterling!)

We started up the mountain after breakfast on Sunday, past a very Byzantine monastery church, and the king's summer palace, half-timbered like a Bavarian hunting lodge, all pointed turrets and stags' antlers. Then through beech woods, with the leaves turning a most beautiful brown and gold and yellow. After an hour's climb we reached a sloping open meadow called the Poiana Regale or Royal Meadow. We were to get to know this well later in the year; when the snow fell we made it our practice slope, and the following spring it was to shimmer with myriads of mauve crocuses.

Presently the beeches gave way to larches and Austrian pines, and when we had been climbing for two hours we got above the tree-line on to a high grassy plain with strange dwarf pines, none more than four feet high, growing on it. The Carpathians are not like the Alps, they are mostly of limestone, and although the mountains rise sheer out of narrow valleys, and look rugged and craggy from below, at the top they are flat and grassy, like Helvellyn.

We took enough food with us for two days, because, although there are plenty of huts, staffed and victualled by the Roumanian Touring Club, Wilson did not seem to think much of the quality of their food. So in addition to our tooth-brushes we were carrying a large loaf of bread, some butter, a salami sausage, a Gruyère cheese, 12 apples, a box of biscuits, 1 Kg of ham and a tin of herrings.

We lunched at a military hut, the Cabana Mihai, at the top of the climb, off cheese and salami; the soldier on duty found us beer. On the way up we had overtaken a German family, father, mother and two pretty daughters. The father was the Ploesti agent of a German firm, and a well known Nazi. However we passed the time of day and were all very polite to each other. We were still in the "no personal enmity against the German people" phase, particularly in the mountains.

After lunch we crossed the watershed till we could look down into the Ialomitsa Valley, lovely, green, isolated, with a little stream, like the Goyt, tumbling down it. I went to that

valley many times afterwards; it always reminded one of James Hilton's "Lost Horizon." To get down we had to scramble through a dense forest of immense pine trees, with long trails of pale green moss hanging from their branches, giving the place a mournful and sinister look.

At three we got to the hut, the Casa Pesteră, where we were to spend the night. It was in an open grassy space near the Ialomitsa river. We were rather put out to find that we were not greeted with the hospitality usual in mountain huts, that there didn't seem to be much furniture, or any food in the place, and that the entire staff, and several other people besides, were standing on the verandah, all talking at once, and running round each other in small circles.

Wilson, who spoke Roumanian, went off on a recce, returning a few minutes later with a bottle of wine and the information that the hut was in process of changing management, and that the incoming tenant, his chattels, his wives, sons, daughters, ox, ass, hens, turkeys, geese, ducks and dogs, about half his furniture and none of his food, plates, or cooking utensils, had arrived on the scene about half an hour before us, accompanied by three officials of the Touring Club to see them safely settled in.

Casa Pesteră is at least eight miles from anywhere, and that's over a mountain, and it isn't connected with anywhere by any kind of road, track, teleferica or navigable waterway. So we dumped our rucksacks, hoping for the best in the fulness of time, and went to look at a monastery.

The river Ialomitsa rises by issuing from a limestone cave, into which Wilson says one can penetrate for $\frac{3}{4}$ mile, at which point the surface of the water meets the roof. At the mouth of the cave there is a little monastery consisting of a tiny Greek Orthodox Church, in a little courtyard, with a cloister round it. Five monks live there, had just heard somebody in the village say that there was a war on somewhere.

On the other side of the stream, tucked away in the woods, we found another little church, from which we could hear sounds of chanting, and presently we saw the old bearded priest looking at us out of the window. We chatted with some peasants for a while, then the old priest came out. He said "Seară Buna" to us, and talked to Wilson for a bit in

very good and educated Roumanian, saying that he hoped we would be comfortable at the Casa Pestera, and that he was even now on his way to kiss the hands of the new tenants and to bless the house.

When we got back to the hut we found that not only had they made up two beds for us, but that a packing case containing plates, knives and forks, and cooking utensils, had arrived on a *carutsa* (farm waggon). It is a mystery how the *carutsa* ever got across country, but the important thing was that it did. What was more, the new landlord said that he could make us an omelette with our ham, and some eggs which we could only think his hens had laid in the *carutsa* on the way up, but the rest of the meal we would have to provide ourselves. What a mercy it was that we had supplied ourselves so lavishly in Sinaia!

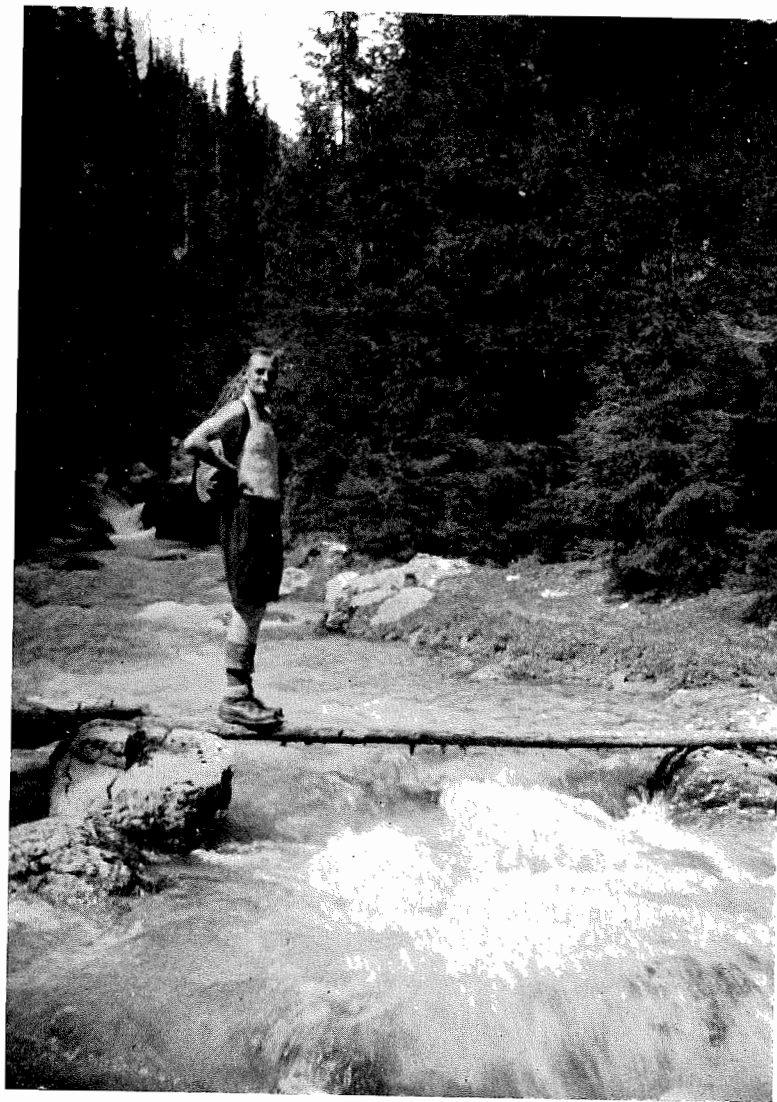
Finally we did very well, the ham omelette was marvellous, and they really do know how to make tea in Roumania. Also they produced another bottle of red wine, and the rest of our dinner consisted of bread and butter, salami, and apple and cheese, the last two an excellent combination, very popular here.

All this was eaten by the light of one small paraffin lantern on the other side of the room, where the members of the Touring Club were going through the contents of the medical chest, with the landlord. Something in the chest, probably indecent, seemed to cause them great amusement.

The only other guests were a German couple from Bucharest who were very upset to find no food available. In the end the landlord made them a stew of some kind, and we gave them some of our bread, for which they were profoundly grateful, in excellent English.

As there was no light, nothing much to sit on, and very little company, we went to bed at 7.45, and found that those good people, in spite of all their worries of moving in, had lighted a stove in our room for us. Our sleep for some time was disturbed by imaginary insects, for which Wilson says he has a fatal fascination, but we slept well enough after we had decided that the insects were only imaginary.

On Monday morning we washed and shaved in the river, which can't have been much above freezing, as the water came



LALOMITSA VALLEY

either out of the limestone, or from snow melting in the higher meadows. The sun was shining and there wasn't a cloud in the sky, so we decided to climb a mountain called Omul (The Man). Wilson said it was 10,000 ft., though the maps (very unreliable in Roumania) give its height as 2,511 metres or 8,238 ft.

We had another ham omelette for breakfast and started serious climbing at 9 o'clock. In the lower meadows the peasants, wearing white leather embroidered waistcoats and pointed black woolly hats, were collecting the sheep to drive them down to the banks of the Danube for the winter. The journey of about 100 miles takes eight days to complete on foot.

The second hour was hard going up a steep, rough path with occasional large patches of melting snow from a blizzard the previous week. The sun beat down fiercely, and we discarded one garment after another. The ground where the snow had melted was a carpet of Alpine plants, unfortunately not in flower at this time of the year. I recognised Alpine roses, yellow geums, and a pale blue gentian.

The last 45 minutes of the three hour climb was like most mountain climbs; one sees the hut at the summit, one smells the wood fire burning, one thinks of that first gulp of cool beer, but how slowly the hut seems to come nearer! The rush of hot, steamy, food-laden air made us stagger as we opened the door, and we persuaded the people to give us our tea and beer outside in the sunshine.

Omul is one of the highest peaks in the Carpathians; the summit used to be on the frontier between old Roumania and the Austro-Hungarian Empire until 1918. We could see the undulating countryside of Transylvania to the north, the flat Danube basin to the south, and the snow-capped Carpathian peaks fading into the distance on either side.

The way down was through a steep narrow valley, the Valea Cerbului, where the snow still lay in deep drifts, and where we sank to the thighs if we tried to walk down in the normal way. The only way to tackle the drifts was to run down them at full speed hoping not to fall over. On either side the crags rise sheer in great pillars of rock reminiscent of

the Dolomites, offering irresistible temptation to the mountaineer. When we got to the deciduous tree line the sun was shining through the beeches, and everywhere seemed to be bathed in bright yellow light, with occasional larches giving a background of bright green.

At one place we roused the curiosity and resentment of two shepherds' dogs, wolf-like creatures with sour tempers and a deep suspicion of strangers. It is always advisable to carry a stout stick and be ready to throw stones. The Roumanian dog is at heart a coward and will run away if one shows fight, but he has a nasty habit of sneaking quietly round behind and taking a piece out of the calf of the leg. That means an unpleasant and prolonged series of anti-rabies injections, to be avoided at all costs.

It was beginning to get dark when we reached the village of Busteni, on the main road and railway. There was just time for beer before catching the train back to Sinaia.

After this introduction we got to know the mountains well in the Sinaia, Predeale and Brasov districts. The snow came permanently towards the end of November, and from the week-end before Christmas 1939 to the beginning of May 1940 we never missed our weekly ski-ing expedition. We had, after all, to keep fit for war.

In spite of all the attractions however, the homesick Briton looks with a prejudiced eye on the foreign field when exile is prolonged and unsought, and when there lurks a possibility that a corner of that field may become permanently his. The Craven district still remains unbeatable, except possibly by the Scottish borderland. Notwithstanding the beauty and delight of many strange places, they seem to be delightful only for about four weeks in the year, at other times they are either too cold (the Englishman's great discovery of the late war) or too hot and fly-blown.

A HAPPY NEW YEAR.

By B. NELSTROP.

The birth of a new year is heralded with tradition, custom and celebration, the latter often turning an easy route home into a moderate severe.

Seeing the new year in on the summit of a mountain is not a custom of which I have heard, although the spirit of mountaineering is moving in the right direction for the formation of such a custom, there being a distinct tendency in this country for mountaineers to camp or bivouac on the summits of our highest mountains, where one experiences nature and its changing moods on a vast scale.

Jim Sherwood and myself first thought of the idea in 1937 and decided to ascend Snowdon by way of Crib Goch and Crib-y-Ddisgl on New Year's Eve, to bivouac on the summit, and descend by way of Lliwedd on New Year's Day.

New Year's Eve came at last, and finishing work at 5.30 p.m., we were soon speeding along towards Snowdonia in the M.G. At 9.45 p.m. we had parked the car at Pen-y-pass, and with the aid of my electric caving light on my hat, torches and ice axes, Jim and myself were making our way steadily up towards the summit of Crib Goch. The old year was going out gracefully, the night being cold and fine. Oddly enough we found little difficulty in keeping to the path.

It was a curious sensation making the final steep ascent on to the narrow rock summit of Crib Goch at close on midnight. We could see nothing below and felt rather detached from the earth and very much alone as we carefully traversed the narrow Crib Goch ridge with a precipice on each side. At midnight Jim fished a bottle of wine out of his rucksack and we drank the new year in. We had crossed Crib Goch ridge, the night was frosty and clear and we felt in good spirits as we continued on our way along the somewhat broader ridge, with good firm snow under foot.

Imprints in the snow of a solitary climber wearing a hefty size in climbing boots suddenly attracted our attention. They had been recently made and went in the direction of the summit. Time now went slowly and after what seemed an eternity of climbing and scrambling, we reached the

summit of Crib-y-Ddisgl; at 2.0 a.m. we were standing on the summit of Snowdon, enveloped in mist.

After a little searching, we found a bivouac a few yards below the summit, where we got into our sleeping bags and ate some food. A wine bottle again emerged, after which music from a mouth organ and song went out into the night. Then all was silent.

Unfortunately I omitted to take my boots to bed with me, and when we got up at eight a.m., they were frozen hard like clogs and were difficult to put on. It was still misty and cold, so losing no time we descended the snow-covered rocks towards the Lliwedd ridge. It was only on our way down from Lliwedd that we paused for our first snack that day.

In 1938 Jim Sherwood was unable to come, but fortunately Hugh Neave (Rucksack Club) and John Chadwick (Fell and Rock Club) wished to join in my escapade, and at 7.0 p.m. on December 31st, we were eating ham and eggs with coffee at a guest house between Bettws-y-Coed and Capel Curig called "The Towers," little knowing what we were in for.

As before, we left the car at Pen-y-pass and at 10.15 p.m. made our way up towards Crib Goch, this time taking my "Itisa" tent, sleeping bags, a primus cooking-stove, food and some spare clothes.

After plodding through patches of soft snow, we reached the summit of Crib Goch at 12.20 a.m. Although it had rained and there was some wind, I thought conditions were fairly favourable. However, after we had crossed Crib Goch, the wind gradually increased to gale force, with very dangerous gusts which, if they caught a man unawares were strong enough to knock him down. I remember being blown sideways and just recovering my balance as I jumped off a small rock step. We kept to the sheltered or north side of the ridge as much as possible, but it was now raining and we were soaked.

When not very far from the summit of Crib-y-Ddisgl, we realised that it was hopeless to continue so we tried to find a way down on the sheltered side of the ridge overlooking Cwm Glas Mawr and eventually by the aid of dim torchlight found a shallow gully of steep grass covered with wet snow. We roped up and descended one at a time, glad to have our

ice-axes, myself leading and Hugh coming down last. After descending a few hundred yards, we found a small sloping ledge, on which I pitched my tent, placing stones round the edge to make it secure. There was only room for one person at a time to undress inside the tent and get into his sleeping bag. However we were very glad to get to bed, where we tied ourselves to the rope, which we had secured to a bollard.

As the matches were wet, I being the cook was relieved of my duties and we were content to enjoy some wine and a good snack of excellent sandwiches which suddenly appeared out of Hugh's rucksack.

New Year 1939 kept trying to snow. We decided that we had enough weight to carry without the wet tent, so we took the pole with us and abandoned it. While packing, someone knocked a tin of soup over. It shot down the gully, hit something, flew into the air and vanished over a precipice. Our route for Cwm Glas lay in that direction.

We roped up and continued carefully down, not wishing to imitate the tin of soup. On arriving at the precipice, imagine our relief when we found a ledge on which we could traverse across it to a slope on the left, which led down to Cwm Glas Mawr. Then we trekked by a fairly direct and cross-country route, through more rain, back to Pen-y-pass.

New Year's Eve in 1939 came on a Sunday, so we could start early and take our time. This time I was fortunate in having as my two companions, Hugh Neave and Jesse Wood, who had climbed together in the Alps. We all lived within half-a-dozen miles of Macclesfield, so Hugh called for us in his car and drove us along snow-covered roads to Pen-y-pass, where we arrived at 2.30 p.m. after having stopped on the way for another good meal at "The Towers."

At 3.30 carrying fairly heavy rucksacks, we made our way up the snow covered path towards Crib Goch. Having passed the ridge before it got really dark, we were soon steadily proceeding with torches suitably fixed to our beings, up the ridge towards Crib-y-Ddisgl.

Fresh tracks in the snow of someone wearing large climbing boots, similar to those seen two years before were again seen, going in the direction of Snowdon. After crossing Crib-y-Ddisgl, we arrived on Snowdon at 7.30 p.m. and pitched

the tent to the south side of the cairn, on the summit plateau, placing stones round the edge instead of using tent pegs.

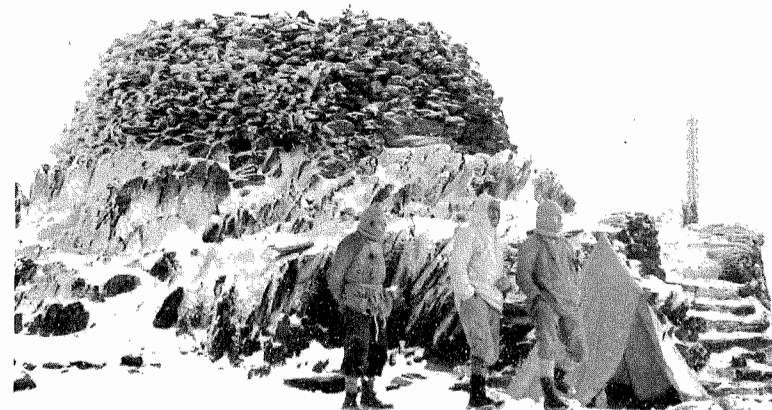
Hugh and Jesse were the caterers and I was the cook. Dinner was soon ready consisting of soup followed by excellent sandwiches and mince pies. As the chief liquid used was melted snow, the after dinner coffee had to be replaced with tea. We took a stroll round before going to bed and noted that the temperature was 26°F. It was fine and there was very little wind. The moon came out about ten.

After wriggling into our sleeping bags with our clothes on, we brought the bottles out and celebrated in the true festive spirit. Eventually we settled down for the night. I was not particularly warm and lay awake. The moon shone brightly and I noticed that Jesse who was next to me, was lying very still with his eyes open. As this made me feel rather uneasy, I spoke to him to make sure that he was still living, and was relieved when he answered me. At 5.30 a.m. the cook went on duty and was soon passing round mugs of hot tea. Not content with this he commenced on Maggi soups and made two varieties before the stove went out. Someone then found more sandwiches which we soon polished off.

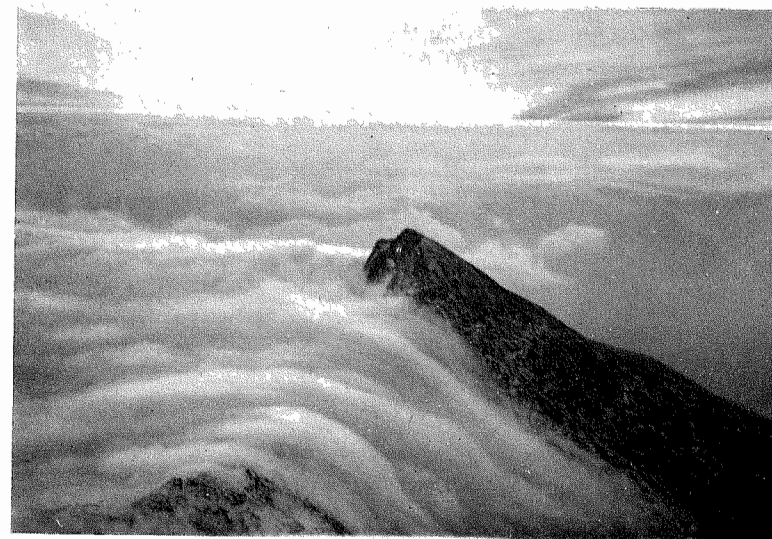
We extricated ourselves from our sleeping bags at about seven a.m. and while waiting for the dawn, made a camera stand with ice-axes and set the camera ready to take a photograph of the party and the tent. Little did we realise that nature's vast stage was set, to present us with a pageant wonderful beyond description, which was to hold us in its spell with awe and wonder. As light came we looked east, waiting for the sunrise. Down below in an unlit void lay Glaslyn like a splash of dull molten lead. Above and beyond was a sea of cloud to the horizon with the summits of the Carnedds and other mountains emerging like islands.

The sunrise was wonderful to behold. Beautiful and vivid changing colours of nearly every hue imaginable lit up the sky. To the north and west it was clear, and as it grew lighter, Anglesea came out like a map at our feet. Cwm Silin mountain showed up plainly to the west, as did the Rivals with the sea beyond. We thought we saw the faint outline of Irish mountains across the sea.

A strange sight suddenly held our attention in the direction



NEW YEAR ON SNOWDON



LLIWEDD

Photos by B. Nelstrop

of Lliwedd. The cloud which had been welling up to the south-east of and below the col between Snowdon and Lliwedd, now reached the edge, flowed over it and ran down the steep mountain side like a fluid, down into the cloudless amphitheatre inside the Snowdon Horseshoe.

Day being well on its way, we struck camp, packed up and started down over the mass of broken rocks covered with frozen snow towards Lliwedd. The sun shone brightly and in places so lit up the mist through which we passed that it was brilliantly white. We came through the top of the mist as we reached the summit of Lliwedd, but when we had descended the ridge for a short distance we suddenly saw to the left and below us that spectacular phenomenon called "The Brocken Spectre."

A small circular rainbow was projected on the mist, inside of which was a shadow image of the onlooker. If the onlooker moved his arm, the image which he saw moved its arm likewise, but no other member of the party saw the image move its arm, because each member saw only the image of himself. When the three of us stood close together, we saw a group of three images inside the circular rainbow—Whymper's three crosses. The necessary conditions for the appearance of the spectre were perfect. The sun being low on one side, threw a long shadow of any one of us on to the mist on the other side.

Shortly afterwards, we were drinking cups of tea in the hotel at Pen-y-pass. Our adventure had already become a memory to be looked back upon with joy and inspiration.

THE ENNISKILLEN GONDOLIERS.

By THE EDITOR.

Ireland for good weather! Since Alpine summers have turned to producing spells of cloud comparable with western Britain, with Norway and Austria no better, the only hope is Ireland. Nor are the Enniskillen caves exhausted.

The expeditions of '35 and '36 had added two fine river caverns to the Marble Arch series, while the value of a boat had been proved in Wales in '37. We had explored this one series more thoroughly, but otherwise had not extended the work of Brodrick, Baker, Hill and Rule on the limestone N. of Cuilcagh, while they had drawn blanks south of Belcoo.

So in August, 1938, another party crossed to the county of famous fighting men with considerable misgivings about camping in long grass amid midges and other pests. July was a dreadful month, and the Friday before Bank Holiday an afternoon of evil omen. The five of us were split up at Heysham between four boats, but hundreds were left behind till one vessel could hurry back. A miserable night, no mill-pond sea this time.

By train Nelstrop and I reached Enniskillen. The storm had been terrific; the hay was afloat in the fields, and the problem of putting up tents and going out to tea in a respectable condition loomed large. But hurrah for Ulster! As we ran into the station the clouds were clearing, Cuilcagh and Benaughlin stood up blue on the horizon and the sun came out. Gowing met us with the news that Mr. Barbour of Killesher House had found us a good dry camp site near Cladagh Bridge. Fred Booth, Godley and Marsden were in good time for lunch at the Imperial and we drove over the long straight lane, now a fine metalled road, to a delightful spot. Another trip in Godley's big car brought in everything, even a bell tent and a great box of Gowing's containing luxuries such as camp chairs, which we laughed at, but used. Four more tents made a striking camp—in Free State colours, Mr. Barbour pointed out. There was *Cymry* to float us over the pools, and enough ladders we hoped. From clegs and midges we were singularly free.

Off went Gowing and I to tea with the Earl of Enniskillen

at Florence Court, in delightful grounds with fine trees. The Earl could not be persuaded to come underground, but suggested hopeful localities, such as the Pigeon Pots, N.E. of Cuilcagh, and arranged for a keeper to guide us; there might too be something near Brookfield. It is curious that neither Lord Enniskillen nor the Rector mentioned caves on the south of Cuilcagh, as does *In Praise of Ulster*. May they be there!

Next morning's plan to carry ladders east to above Brookfield and work back, went well till we emerged from the Marble Arch woods into bright sunlight and reached Pollnagollum, one of two thickets near to Legg Farm. Now Pollnagollum is quite a generic name for Irish pot-holes, meaning "Pot of the Pigeons"; besides the two N. of Cuilcagh, there are the Coolarkan Cave by Boho, the long Clare Pollnagollum, and doubtless many others. *Poll* is phonetic Irish spelling (Bartlett considers the vowel short) and *Poul* is one of the quaint and difficult English spellings so common in Ireland. For instance no one would suspect that *lough* stands for the Irish and Scottish word *loch*. The former is a fantastic spelling which should be discarded.

The six could not resist the temptation of scrambling down into the cool green of the open hole. Ahead under an arch, the big cavern closed in after a few yards up steep rubble to a vertical face of solid rock, no connection here with Pollthanacarra. An obvious hole in daylight led under a huge boulder by a 24 ft. ladder pitch to the top of a scree slope in a chamber 55 ft. by 7 ft. with a faint roar in the distance. The further end after a short climb closed in, but up a crack came a louder roar; at the bottom Nelstrop went through a tight hole into a short passage leading to water.

It was a great discovery! A few yards off, the stream foamed out of a long deep pool in which there seemed only such current as *Cymry* could stem; downstream we went up into a steeply sloping cavern which can only be separated from the ladder chamber by a very thin wall, but after following the water past a first block among boulders it disappeared hopelessly.

Very pleased, we lunched out in the sun, and then, after a visit to the Pollasumera swallet (also called Pollton), headed

across the boggy pastures, dotted with shake-holes. On a delightful dry "island" we all sank willingly in the grass for a rest in the hot sun. After a bit, Godley, Marsden and I pulled ourselves together, took lamps only, and struggled on to the south of the Brookfield knoll. There were endless deep shake-holes, many full of trees; soon only one man went down each, the others sank in the heather. At the beck just past the knoll, 380 yds. E.S.E. of point 912, Marsden drew a blank in a promising swallet, and Godley reported eighty feet of passage in the next hole.

Back on the "island" the whole party picked up their loads and sought Rattling Hole close under Gortmaconnell Rock, a good deep pot-hole amid a dense thicket swarming with midges. An intricate route was forced through the thorns, and with hand and body lines Nelstrop went down the rift over awful mud right into an amazing collection of old iron, tools and incredible masses of *boots*. In turn all stood by the ropes in a martyrdom of midges, and went down to the choked bottom. The other Rattling Hole to the north is a trifle.

On Monday the Skreen Hill Passage was done in record time, and the rubber boat proved the final pool to be 44 yds. long with walls going straight down except for a very low arch. We also boated from C to D in Marble Arch (see Brodrick's map) and lowered a rope through cracks in the roof. Then on to Cradle Hole, and the same bad luck on the end pool, climbing out by Polnagapple and its awful thickets.

Tuesday was too cool for a bathe, but we went out in Gowing's folding canoe, two at a time, round an island a mile or so out in Loch Macnean, while *Cymry* performed amusing antics near the shore.

Wednesday was simply glorious. At Rourkefield under Benaughlin keeper Ford met us and assured us that the Pigeon Pots were really worth-while holes of incredible depth. Up the dry valley is a delightful two miles' walk to Legg na Hurry (or Legacurragh), a marked gap in the eastern limestone escarpment. Once on top where there are grand views of the end of Cuilcagh and of the cone of Benaughlin, we stumbled through deep heather in an area of sink-holes filled with bushes, promising much. Ford guided us past one pot

to another into which a stream fell. One ladder down the first hit exactly the right place on a ridge of scree dividing a big open pot, rather earthy, deepest at the E. end (84 ft.), where the floor finally rises under an overhang.

The ladder lead into the second pot is 47 ft.; the water enters through a crack 13 ft. deep, and runs along twenty yards to a smaller hole. There it goes into darkness, sharply left, down a 20 ft. climb and then right in a fine passage in cherty limestone, giving splendid working room at the top of a pitch. Gowing went out and we took off the bottom ladder, but the pitch was much deeper than we thought. This meant retreat from Pigeon Pot II.

III. looked a giant, much like Gable Pot on Leck Fell, and Booth scrambled down a steep grass slope over twenty feet. A trial trip on two ladders tied to a big tree showed a really fine deep pot. The ladders on a double rope were worked well below the edge and Fred's next trip ended in a shout that he was down at 79 ft., just over a hundred from the tree. To the north was a fine ascending chamber, to the south a close crack. All the main fissures about here bear 15° to 25° (true).

Now up with the ladders and *dolce far niente* in the heather and sunshine. Hurrah for Ulster! The sink-dotted area was so large optimism reigned. Would there not be small holes in the thickets? But we found nothing on the way back.

We were there again in the morning with our only other ladder. It was a gloriously hot trek to No. II, where from the heather-covered watercourse the short ladder took us to a ledge ten feet from the floor. On the ideal second pitch the two ladders were lowered well down. The first man cleaned masses from the walls, passed the pinnacle from which we had contemplated climbing and landed at 74 ft., total depth about 140 ft. A man crawling into the north end, a muddy grotto, was clearly in sight from the top, south end a narrow crack.

Back in the sunshine, I pointed out there was just time to load up, drive fifteen miles to Boho and explore the little cave there. But for once Gowing went on strike and we drifted back to the cars and camp and a visit from Mr. Morrell of Enniskillen who reminded us that the farms are nowadays in the hands of many owners, and so while we had visited the

Pigeon Pots by the Earl's permission, elsewhere we were on other people's lands. However on Legg Farm the owner was a good friend of Mr. Barbour's.

Now to see what *Cymry* could do in Pollnagollum. The current was nothing to worry about, so away went Gowing trailing a cord, on and on, till the string was tied to Alpine line as he stopped. A grand straight tunnel, bearing 190° true, but it was doubtful if the boat could be pulled back empty owing to rocks in the fairway and stalactites at the far end. String and line were halved, and Gowing with one half went off again trailing the other; it was hopelessly short. "Off to the surface," was the cry, "borrow something from the farmer—drive to Enniskillen and buy string." But first I said, remembering all the dead-ends we had found, "Is it worth more than a visit one at a time?" I made the fifty yard voyage, landed, and was staggered. It was a vaster place than Upper Cradle Hole and a full dress expedition. Out we came, and the farmer handed over his cart lines to be untwisted, on promise of my Alpine line.

Down below again, Gowing went over and, crouching at the water's edge, he and Booth found a clear fairway on which to drag *Cymry* cautiously back. So one by one we all paddled over the deep water. We were then in a splendid chamber with singular rock formations and a double swing of a wide watercourse. On the right bank you can follow a solid wall, on the other you mount high over huge boulders. Passing through a great oxbow we came to a great "beehive" of stalagmite and then to a second big pool. Three returned for the boat which had to be carried with great care, since if ripped only one of us could have done a fifty yard swim. While waiting, the other two climbed the "beehive" and ascended first one and then another long unstable slope of mud and rock so high that the roofs must have been close to the surface.

The second pool, about 250 yards from the first, is simple; fifty yards on over pebbles the grand high passage ceased in a third pool, bearing still 190°, with a low roof and curving into the distance. Gowing paddled forty yards, landed, and went on a hundred yards in another grand passage. Meanwhile we went through a hole on the right bank into a high chamber

with a floor above the end of the pool. A rock face can be climbed forty feet. By the water's edge, I was in one place, Booth in another, and Godley floating in *Cymry* close at hand, but unable to get near owing to submerged rocks. The boat might have been dragged up on a line and carried back, but for the last over and first back it would have been a tricky job, and the Y.R.C. has no use for a divided party. So we retreated to try again next year with a fleet and an army.

Whitsun 1939. Shall we ever know such weather again! Chubb was right when he said early mist meant heat. Ten whole days without a cloud! The fleet was *Cymry* and *Red Hand*, the army twelve, Fred Booth, Nelstrop, Godley, Marsden, and the writer (Gowing had to stand down for the first time) with Chubb (the President), Davidson, H. Armstrong, Davis Burrow, Stringer, Bowling and King. We slept and ate in empty rooms of Barbour's great farmhouse, and cannot be too grateful to him for his hospitality and kindness.

On Saturday we had to hire a lorry to take all the stuff out from Enniskillen and after that a crowd went into Pollasumera. When Marsden and I later followed the beck, we found it dry over its whole course; hence the permanent supply of the Cladagh Glen rising (the cascades) cannot be from Pollasumera, as in dry weather there is nothing to come. The bulk of the flood water into Pollasumera must pour through Pollnagollum to the Skreen Hill Passage and out through the Marble Arch.

Booth led six men into Marble Arch Cavern while Nelstrop, Marsden, Godley, Davidson, King and I tackled Pollnagollum. The two boats made work safe and easy; the curving third pool gave a very interesting voyage in a much eroded and stalactite hung tunnel with low roof and many underwater snags. Beyond, we struck a vast and very lofty hall, not less than twenty feet wide for over two hundred yards, bearing 165°, the stream finally disappearing into the wall on the right. At the end we went up scree to a narrow passage with a fine side chamber and down a rock climb to a side pool, which was boated to make sure it went nowhere. Then we went twenty-five yards to a closing crack and climbed a stalagmite wall into a narrow passage, with an ascending side grotto, ending after eighty yards. We had done about 700 yards.

Nelstrop took photos while King and I ferried back and

chained 53 yards to the second pool which we crossed on a submerged ledge, 20 yards long ; then we chained for 250 yards, cutting the corners of the final meanders. Before the company were over the long pool, Marsden and I climbed a long slope of horrid mud to a vertical wall somewhere near the surface. Bearings and chain gave a rough survey which places the watercourse away from the next big shake-hole, Polldownlog, but well on to Pollasumera.

Out in the sun, we found the others had thoroughly explored Marble Arch Cave with the area between holes C and E of the plan, and laddered Pollthanacarra—full of corruption, to be inspected only from the last rungs.

Nelstrop and Godley made good time on Monday for the long trek up Cuilcagh, so that the former might get away. Marsden, King and I took Mr. Barbour up the Skreen Hill branch of Marble Arch, next picked up the ladders left for us by Booth's party then inside Pollnagollum—so well hidden they took half-an-hour to find—and carried in the hot sun to Gortmaconnell Farm. Here Brodrick's distance and bearing placed the Pot in a large sink, though he did not mention the farm. There was something odd too in the way the family acceded to our request to explore the pot ; it wasn't there, but a dead cow was !

With our loads we struggled over a field and swept the sinks beyond rather hopelessly. Marsden and I sank exhausted in the shade, but it was King's first search and he went on tirelessly till he found the pot. Now a recollection of delight, sun and heather on top, cool shade at the bottom of the 60 ft. ladder climb, sheer joy. As the day drew on, we rose and made the first ascent with ladders of Gortmaconnell Rock. Another siesta, then straight down to Pollnagollum, where lay all the others but Chubb and Burrow, who had gone to cook the dinner. The party was home two hours late !

Tuesday meant farewells, and for Marsden and me a sample of the grand boating on Loch Erne. Later in the week we found the elusive Legnabrocky Pot on the far slope of the Hill from Legg, close to Monastir Sink, but had no ladders with us. Then on and on, over miles of bad going up the dry Pollasumera beck to the Pigeon Pot area, its west side more defined than we expected and the three pots plainly in the

weakest place. Once we found a pool full of Bogbean—why only one pool among so many ? Then we tried for Polliniska, a mile or so off over a region of peat crowded with busy diggers.

The heat was so trying and the neighbourhood so unpromising we retreated to Legg-na-Hurry and swept through the heather on its left slope, drawing blank after blank. It was a day on which one could go on walking and walking between good rests, but alas, it drew to a close and we climbed to a path which runs along the edge of the limestone platform above Florence Court, with a fine view north. So we came home to the abundant provisions left by the main party.

Now for the Noon's Hole area. It has been assumed that Baker, Hill, Wingfield and Kentish staying at Derrygonnelly and Boho had worked it completely, but as I found on my last afternoon driving across to Loch Melvin, there is a great deal more to be said. The great cliff of Knockmore, under and past which the road climbs, is a stupendous thing ; in a gorge like Cheddar, it would be famous. The hachured one-inch Ordnance map does not show the abrupt scarp of the Noon's Hole platform. Actually I consider a great area of Sheet 44 has not been properly drawn ; the Six-Inch map is good, but many names of farms and hamlets must be filled in.

On the first Friday I drove up to Noon's Hole, walked to Pollanaffrin, and outside the intake above the upper farm found a definite possibility, a stream cave close under the surface. Then I climbed on to the main platform, to the south and viewed a shallow basin where a swallet was marked on the map. There was no stream into it, but rocks and bushes spoke at once of a pot-hole. As I was rejoicing over my discovery one of the men busy all round cutting peat came to look at a stranger. He had no name for it, so being just inside Reyfad townland, Reyfad Pot it must be.

I went on to Murphy's Hole in a great copse, to Rattle Hole looking difficult, to Ivy Hole not worth putting on the map, and via a gill full of thorns to Oweyglass Caves, great holes seen from the drive up, but very small affairs full of boots. Why these great masses ? Boots burn well.

Marsden and I came past Boho, much cheered by the extension of tarring on the long dusty lanes, and climbed the gill to Pollanaffrin with ropes and one ladder. The pot was

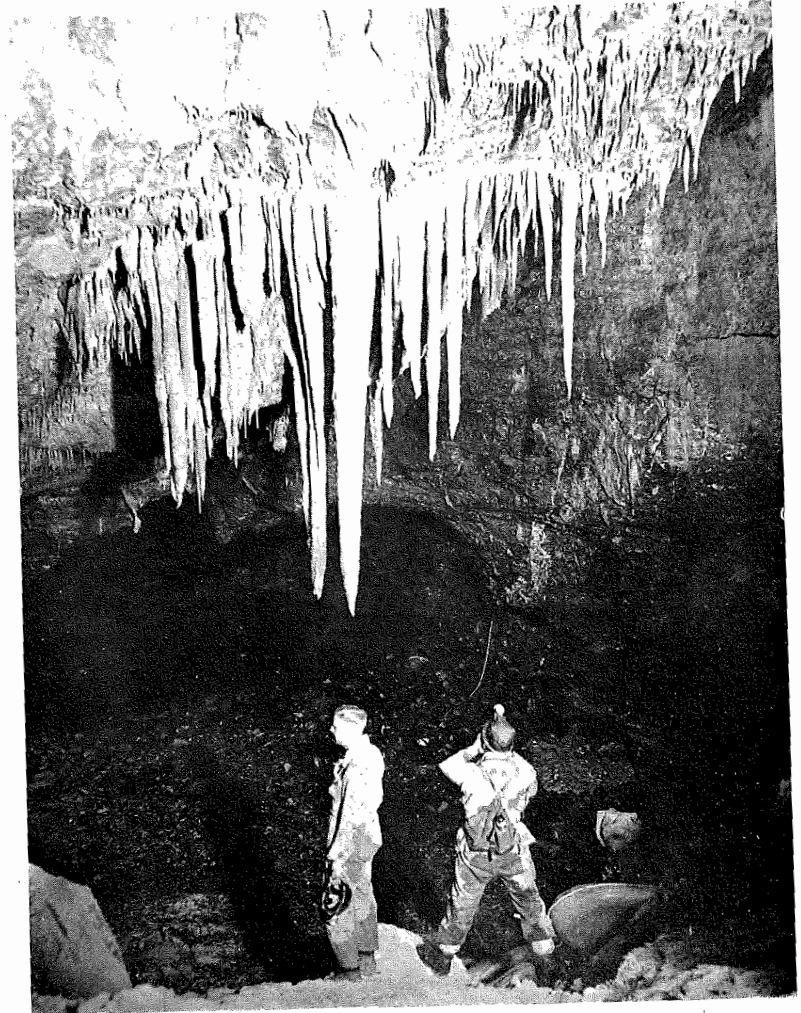
soon done ; the waterfall is from the swallet by the farm ; in a descending rift we found a small crawl passage.

Then up the hill we went in great heat, dodging a grass fire, to Reyfad Pot, exactly half-a-mile S.W., and due S. of Noon's Hole. We chose a good lead and made the place safe. Those who come after the pioneers are rarely grateful ! They ought to be, for soon the working place was not the same and most of the ladder lead had gone down. A pot 37 ft. deep, on its south side a great arch with a great shaft inside. Marsden kept on the rope and tested it thoroughly, one lucky stone sounded like two hundred feet ; we were well rewarded.

At Murphy's Hole, once through the bushes, we found an easy climb down a grassy rift into a picturesque open pot, 50 ft. deep, but Rattle Hole was serious, accessible only by a rift going down in vertical chimneys. The third was extremely smooth, and the safe way was to ladder this, but the whole shaft was in full view, it was late now, so we departed. I hesitate to suggest a heresy but there is nothing of a grass filled rift in Rattle Hole, only stout support from a rope. Was it Murphy's Hole which Lloyd Praeger went down ?

On Marsden's last day we drove to the Coolarkan Pollnagollum, lunched in the grateful shade of the huge mouth, and did the 150 yards walk to a big block of stones, as reported by Jameson in his 1896 article. Then back to Boho and into the curious labyrinth below the road. We came out in the dry bed upstream and not in the gill across the road ; the cave has three entrances, not two. We were too annoyed to go back and do the other part, but drove to the old place below Pollanaffrin and after carefully covering the paintwork of the car took the boat into the thickets and began a dreadful struggle down the gill to Arch Cave, leaving such a trail in a line of weakness we got back with ease. At the magnificent arch we blew up the boat and launched it on the pool close inside. All questions were soon settled—not a ghost of a chance of further discoveries.

Sunday I spent some hours on top of Benaughlin ; Monday I took the Rector and Mr. Barbour into Skreen Hill Passage, wading out of Marble Arch with ease. Keep the right bank till forced off. then it is shallowest in the middle.



IN POLLNAGOILLUM

Photo by B. Nelstrop

RESCUE CALL TO ROWTEN.

On 8th May, 1939, a Leeds Cave Club party laddered Rowten Pot as one pitch, 235 ft., the longest ladder climb in Yorkshire, as Gaping Gill can be divided into two, and put down five men and an inexperienced girl, leaving Mr. Waller at the top—that is, they did not use the Bridge, 70 ft. down.

On the return about 3 p.m. Mr. J. H. Lambert led up, had some slack on the life-line so that he could get on to the Bridge, slipped and fell. The line ran through Mr. Waller's hands till they were in a terrible state and Lambert was not killed though badly hurt. One man, Sheard, I believe, made a gallant climb out and ran for assistance, while a fierce, quite local, thunderstorm burst on Rowten Pot.

Two wardens of the C.R.O., G. Wilson and N. Thornber with Bloom and Wheel of Giggleswick School came up about 4.30 with the hammock stretcher, and tremendous efforts were made to rescue the five below with the help of the many who gathered. Realizing the difficulties Thornber had left almost at once to seek further aid.

It was found impossible to divert the water. Mr. Wilson went down through the flood and reached the ledge 40 ft. from the bottom, where Mr. Burgess (Leeds Pennine Club) joined him and Kenyon. Burgess went on and found the frightful conditions had forced the others into the bypass of the next fifty foot pitch, a tricky traverse, leaving Lambert unconscious in the only dry corner. While momentarily unwatched he had moved and fallen.

When the stretcher came down the girl was strapped in. At the end of an hour (remember the conditions, the ropes were biting two feet into the earth) it was hauled up, fouled the ladder, and it was long before Lord and Mitchell found her in the great mass landed on the Bridge, 7.30.

Mr. Wilson was in a terribly exhausted condition when helped up. In the end as the flood ran off all had been brought out about midnight. Great lamps provided by the police rendered valuable assistance.

A general call seems to have been issued, received by the Y.R.C. about ten. At 11 p.m. Davis Burrow, Matheson, F. and H. Booth, Hilton and C. E. Burrow, H. and F. Stembridge left Leeds, while Gowing and Sale left Billingham.

Four of them had been out carrying to and working in Nick Pot.

After a necessary halt at Settle Police Station, the dramatic night drive went on to Kingsdale, and between 1 and 2 a.m. the rescue parties were found on the Kingsdale road, having suspended operations. The Y.R.C. at once began work, the ladders were reset, their own ropes used, the easy way to the Bridge opened, and on a glorious morning Fred Booth started down. Hilton was on the main floor, while Booth with Messrs. Fell and Procter, friends of Mr. Lambert, went round the bypass and found him drowned in the pool below. One account says, all out by six,—another, begin work 3.15 a.m.; Booth leaves the Bridge, 4.15 a.m.; all out 6.50 a.m.

The Y.R.C. men are loud in praise of the grand work done by the Wardens. As long foreseen it is only late on Sunday night that they can expect on a serious job the arrival of powerful expert parties.

Cave Rescue Organization.—In case of accident the Wardens, Messrs. Hainsworth, Lord, Thornber and Wilson, are called on by the Police to advise action to be taken. Since our last number they had to search for some Bradford pot-holders in 1938, who were found cut off in Penygent Long Churn, and their own club was called out. In 1943 a tent and overalls were standing unused by Alum Pot, Long Churn passages were searched at midnight, and later Hainsworth and Thornber descended Alum Pot in vain.

On several occasions the Wardens have been caused anxiety, e.g. a B.S.A. party on an appalling day were cut off in Disappointment Pot. They must not be expected nowadays to lead parties underground.

Deliberate popularisation of the game has caused the pot-holes to be held cheap, 200 to 300 people taken down Gaping Gill! The old view was that a serious pot-hole was the equivalent of an Alpine expedition. Nature will strike unexpectedly and with tremendous power. Now the A.G. accident foreshadows the horrors of a winter rescue call.

WAR SERVICES.

WALTER EDMUND EVANS, Captain, Mountain Warfare School, Palestine; killed August, 1943, exploring crags.

SIDNEY THOMPSON, Flight Lieut., R.A.F.; crashed near Brussels, March, 1945.

JOHN FREDERICK WARDLE, Royal Tank Regiment; killed in action in Libya, 2nd January, 1942.

- P. N. BARTLETT, Territorial Captain; Intelligence Officer, 51st Division; St. Valery, 1940; prisoner five years.
- R. E. CHADWICK, mobilised with 121st Field Regiment, R.A.; Lieut. Instructor at O.C.T.U.; Captain 27th and 15th Field Regiment; India, Persia, Italian campaign.
- P. F. FOLEY, Captain, R.E. Known to be Colonel.
- W. LACEY, Territorial, Green Howards, Major, France 1940, Dunkirk; by the Cape to Libyan Desert, Cyprus, Palestine; Home to re-form. Instructing officers.
- G. H. LOWE, Captain, Malay Volunteer Regiment; Singapore; prisoner till 1946, Death Railway.
- T. NETTLETON, Territorial Major (1934), Humber, Tees, Tyne, A.A. Gun Zones; Lieut.-Col., 1940, to W. Africa to form W. African A.A. Regiment; Sierra Leone till 1943; India with Regiment. Retired 1944. M.B.E., T.D.
- W. M. ROBERTS, Captain, Scientific Reserve; O.C.T.U.'s, Major; Retired 1941.
- J. B. B. SHERWOOD, Territorial Driver, R.A.S.C.; Commandos, 1940; Middle East, 1941, Sergeant, M.M.; 1943, Second Lieut., Royal Ulster Rifles; 1944, S.E.A.C., Lieut. Commandos, Special Boat Group, Arakan to Rangoon; Captain.
- J. TATTERSALL-WRIGHT, Territorial Major, commanded 197 H.A.A. Battery (Leeds Rifles) and 324 Battery 103 Regiment till August 1941. Second in command 103 Regiment. 1942 on, H.Q. A.A. Command, adviser on use of films for training.

- H. G. WATTS, Territorial Reserve of Officers, Captain ; Special Duties, Roumania, Greece, Jugo-Slavia till wounded in April, 1941 ; 1942 on, Instructor Special Forces, U.K. and Middle East ; Major, 1943.
- J. C. ADDYMAN, called up 1945, R.A.F. Ground Staff ; Egypt, S. Rhodesia.
- M. H. BOWLING, R.E.M.E. ; Belfast, Orkneys 1941-2-3 ; India, 2 years with H.Q., A.L.P.S.E.A., planning ; Warrant Officer.
- N. P. ELLIOTT, entered R.N.A.S. 1942 ; Wingfield (Cape Town), 1944 and 1945 ; Radio mechanic, Petty Officer.
- S. MARSDEN, entered R.N., 1941 ; Seaman, Coastal Force, 1942 ; 1942-6, Commission, Mine sweeping, Liverpool, Sheerness, Lowestoft, Germany, Lieut., R.N.V.R.
- D. MIDDLETON, enlisted 1944, called up 1945 ; 15 months in the ranks, Second Lieut., Life Guards.
- F. S. SMYTHE, Adviser on Equipment and Personnel, 1940 ; 1941-2, Squadron-Leader, R.A.F. ; '42-3, Combined Operations, command of Mountain Warfare School, Braemar ; '43-44, Lovat Scouts, Lieut.-Col., training in the Rockies ; Staff, Italy.
- G. B. SPENCELEY, joined R.A.F. second day of war ; Sergeant, Middle East, 44 operations ; shot down at Essen in second thousand bomber raid ; three years prisoner, Warrant Officer.
- F. W. STEMBRIDGE, December, 1940, R.A. ; Sergeant, Alamein ; Lieut., through the Italian Campaign with 8th Indian Division.
- H. S. STRINGER, Gunner R.A., Second Lieut., 10th Field Regiment from the ranks, 13th Anti-Tank Regiment ; India, Palestine, Irak, Syria ; Major, Resident of the Courts of Cyrenaica.
- H. THOMPSON, R.E., October 1939 to January 1946 ; Sergeant. France 1940, Calais evacuation ; through last Western Desert campaign ; Greece, six months with Special Force paratroops ; Italy, end of campaign, four months ; Greece again.
- P. W. THORNTON, Dental Branch, R.A.F. July 1942 (Fl.-Off.) to May 1946, Fl./Lieut.

IN MEMORIAM.

THOMAS SINGLETON BOOTH.

The loss of T. S. Booth is a very great and personal one to all who have been his comrades. He died in April, 1938, in a plane approaching the Alps he was never to see.

Tom, as he was affectionately called, made a name for himself which will stand for ever in the history of pot-holing. His indefatigable energy and tireless strength were the mainstay of many parties in the pioneer days underground. As a youth a breakaway of six months as an apprentice on a four-master was enough to settle him down to business.

He was in the Y.R.C. in its first year, on the Committee in its fifth and under popular pressure the 1930 President. When Calvert's party first attacked Gaping Gill, September 1895, Calvert and Booth reached the Ledge, then covered with stones. In 1896 after making the first ascent of Great Gable Central Gully direct with Leach and Blake, he was in the first English (*i.e.* second) descent of G.G. and it is a fact that he and Gray went round the West Chamber.

The great campaigns of '97, '98, '99 were by two parties and the history of the 1897 attacks on Rowten Pot by Booth, Swithinbank, Parsons and Cuttriss is a romance yet to be written. He led the fourth G.G. descent (1903), doing the Booth-Parsons crawl, and two years later the South Passage. His descent through the Flood of 1909 is famous, and his Spout Tunnel lead (1910) and his landing with Wingfield on the Buttress (1913) have never been repeated, owing to the cable now going down the main shaft.

CHARLES SCRIVEN.

Charles Scriven who died in May, 1938, was a member of the Club's first two Committees, and Treasurer for the next three years. He was evidently the Club's camping expert, and a stout supporter of the pot-hole parties in the great campaigns of '96 to '99, notably of the many attacks on Rowten Pot in 1897. Many early meets owed their success to him and to his gift for making the recruit welcome. He was elected an Honorary Member in 1923.

GEORGE YELD.

George Yeld was for fifty-two years a master at St. Peter's, York, and for thirty years Editor of the *Alpine Journal*. We elected him Hon. Member in 1921, and he often came to our Dinners. At one time he climbed with our member, G. W. Lloyd of Stockton-on-Forest. He died in 1938 at the age of 93, and a full account of his climbing career will be found in *A.J.*, Vol. L, p. 297.

ROBERT RIMMER.

As managing director of the Hotel Metropole, the host of the Leeds Luncheon Club and of hundreds of visitors to the city, also for some years President of the Yorkshire Lacrosse Club, Robert Rimmer was a very well-known man. He was a great hill walker, a great sportsman, and a staunch friend. He came into the Y.R.C. in 1927, too late to become a veteran pot-holer, but we have pleasant memories of his valuable aid in several stiff expeditions; he became Hon. Librarian in 1935. He died in June, 1939, after a long illness bravely borne.

JAMES W. PUTTRELL.

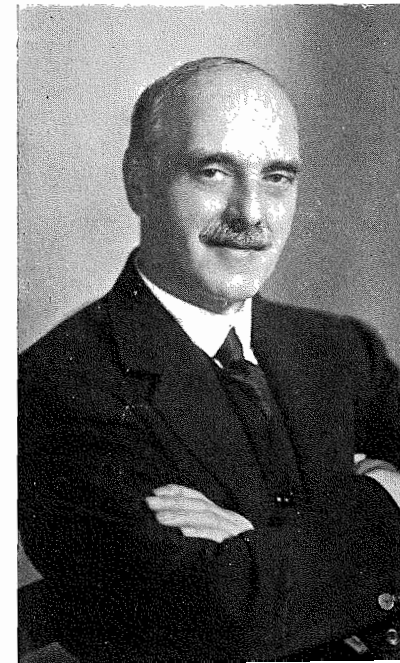
A member since 1900, Puttrell's was a well-known name in the early days of rock climbing, particularly on the Derbyshire gritstone. Before the First Great War he had several seasons in the Alps, but his particular interest was the Derbyshire caverns. He was also an expert mineralogist. Shortly before his death in 1939 he published an account of the Speedwell Cavern in *Caves and Caving*, Nos. 2, 3, 4.

ALFRED HOPKINSON.

Sir Alfred Hopkinson, one of the famous five Hopkinson brothers who pioneered so many stiff climbs in Britain, was Vice-Chancellor of Victoria University when he was made an Honorary Member in 1907. He had been fifty years a member of the Alpine Club. Full obituary notices of his many sided career appeared in *A.J.*, *LII*, p. 114 and in *The Times* of 13th November, 1939.



T. S. BOOTH
(President 1929-30)



ALEXANDER CAMPBELL.

A prominent figure in the engineering world and a great worker for Leeds University passed away in 1941. Alexander Campbell joined the Y.R.C. in 1903 and served four years on the Committee. Up to the Great War his delightful personality was often present at our meets; thereafter he grew too busy but we all rejoiced when Leeds University bestowed on him the degree of LL.D.

JOHN FREDERICK WARDLE.

One of our youngest and keenest was killed in action in Libya on 2nd January, 1942, serving in the Royal Tank Regiment, having been a year in the Middle East. John Wardle's death came as a great blow to his friends in the Club and elsewhere, and those closest to him will feel his loss keenly.

Elected in 1938, he was an enthusiastic pot-holer, and by those who were with him will be best remembered for his work in the second descent of Boulder Chamber Pot, Gaping Gill, in that year.

John enjoyed life to the full and helped others to enjoy it. Whether it was a thorough wetting, a car breakdown with a long tramp at night in pouring rain, a ski-ing holiday ruined by bad weather, he kept up the spirits of his companions, and even made such experiences enjoyable and worth looking back on.

His cheery companionship will be sadly missed, but a host of happy memories remains with us.—J.T.G.

FRANK BRUCE COOPER.

Frank Cooper passed away in January, 1942 after a long illness. Joining the Club in 1928 from the University he rapidly became a first-class rock climber and at Easter 1929 led up Great Gully, Craig yr Ysfa, Lliwedd Route II, and Crib Rock Buttress on his first visit.

A business appointment took him to Derby and his love for the hills developed. After Skye in 1930 he spent many Easter holidays climbing hard in Scotland, and on Summer holidays in the Alps.

He was of reserved nature and gained much pleasure from his library. Apparently of good constitution and considerable strength his passing in the prime of life was a cruel blow. His friends have lost a good comrade.

CLAUDE ROULSTON BARRAN.

The Club lost a loyal member of thirty-five years standing by the death of Claude Barran in January, 1942. From his father, our third President, he inherited a love of mountains and began to taste the delights of climbing while still at Cambridge. Entering manufacturing business in Leeds he attained to various posts of responsibility. He served in Greece during the First War. On his only Swiss holiday he climbed several Arolla peaks including the Za. But his native county had a warm place in his heart and he was often at Almscliff, the Hill Inn, and of course the Dinners, while too he was closely associated with the musical life of his city.

We have been deprived, all too soon, of a man in whose character a deep-seated love of the hills was as vital an element as his modesty, sincerity, high sense of duty, and capacity for friendship.—A.M.W.

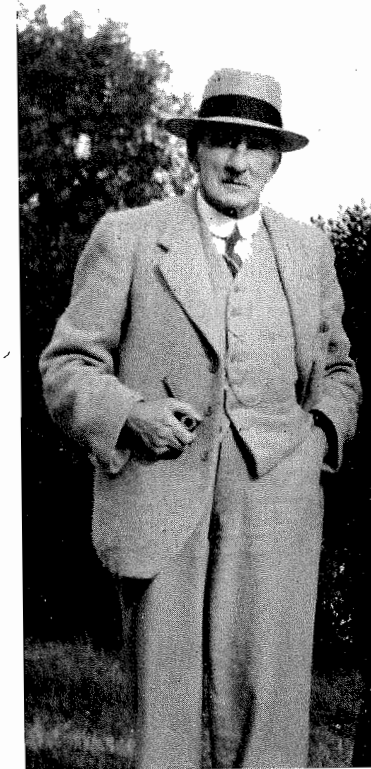
JOHN NORMAN COLLIE.

For full memoirs of this great mountaineer and his astonishingly varied career it is best to refer readers to *Alpine Journal*, Vol. LIV, p. 59. Collie was elected Honorary Member in 1909, and some of us had our first talks with him down in Gaping Gill.

GEORGE THEODORE LOWE.

Our first President died in the fullness of years in 1942 in the fiftieth year of the Club's life, though he did not see its actual completion.

He himself told the story of the founding of the Club in his article "Forty Years On" (*Vol. VI, p. 10*), the others regarded as founders being, Bellhouse, Green and Slater. The very first pages of our *Journal* say that in view of the fact that to him, if to one more than another, was due the credit of bringing matters to an issue, Lowe was voted to the chair on October 6th, 1892, and thereafter elected President. No doubt it



G. T. LOWE
(First President, 1892-3)

was he too who induced Slingsby to succeed him.

Such initiative had behind it a considerable knowledge of this country. He had walked the Roman Wall and the Northumberland Coast, wrote the Cheviot chapter in Bogg's *Border Country*, and another in *Edenvale to the Plains of York* for long the only accurate information on Nidderdale caves. He had been in Norway, Finland, and even Canada, and had several seasons in the Alps. His best was in 1895 with Slingsby, a first ascent of the Rotstock S.W. ridge, and the remarkable first traverse of the Nesthorn S.E. ridge, following the Hopkinson brothers, 17½ hours out from Bel Alp.

Lowe was in Calvert's second descent of Gaping Gill and several other pot-hole expeditions. Oddly enough most of the pioneers left Leeds about 1899, and Lowe settled down in Huddersfield.

We who owe so much to the Club, know how greatly we are indebted to him for his lofty aims and ideals and the fine spirit he set going in the Y.R.C.

H. H. BELLHOUSE.

Though not the first elected Hon. Secretary, Bellhouse was the first Hon. Treasurer, and practically Secretary for the first year, filling the latter office for the next five years, when like several others he left Leeds. The Committee placed on record that his services had been invaluable. There is no doubt Bellhouse was a tower of strength in those years when the Club was so far local it could have frequent and regular lectures, a feature we should be glad to revive. He was not a great rock-climber or pot-holer, but a great walker with a wide general knowledge, particularly of Yorkshire.

Bellhouse became President 1927-9 when he had retired and was able to attend Meets. He died in December, 1942, having seen the Club he had done so much to create complete fifty years of life. At the first Dinner of his Presidency, referring to the great losses to the climbing world in 1927, he uttered striking words, "If these men could speak to us they would say, 'keep us in remembrance; ah, we know you will not forget. We know your sorrow, we felt like sorrow for our predecessors, but we did not allow sad thoughts to overcome us. Keep us in remembrance, and when you meet

together make merry as we used to do ; let gladness predominate. Crack the old jokes, sing the old songs, keep your hearts set on the heights ; carry on'."

WALTER EDMUND EVANS.

Edmund Evans was one of the Billingham men when elected in 1931, and later a consultant in London. Volunteering when war began, he was sent to Egypt, but office life had no appeal, so he transferred as a climbing instructor in Palestine. Here he was supremely happy at a job he loved with men of his own eager type.

All who knew him must regret that a life developing so broadly was ended by the mischance of loose rock while prospecting new climbs alone, but he would be content to go that way. His interests were as much human as scientific, and he would have been happy in spheres other than industry.

He had a tremendous zest for life. Climbing had his whole heart whether in Britain or the Alps ; he shared the Flood Entrance rag, and was first to tread the Marble Arch New Chamber. Cheerful confidence on the rocks and laughter round the fire in the evenings made a holiday with Edmund delightful in remembrance as in experience.

CUTHBERT HASTINGS.

Cuthbert Hastings died late in 1943, aged 82. He and his brother Geoffrey, the well-known mountaineer, were rowing men to begin with and made a canoe journey down the Lune. But they were also the men who put the iron ladder in the Gable Pot stream passage in 1885, ten years before the advent of the Y.R.C., and the importance of the incident was not recognised by Hastings himself till 1936.

He seems to have been abroad, joined the Club in 1900, and was in the first descent of Rift Pot, and the second of Long Kin West. In the heroic age of ladder climbs in G.G., he is credited with carrying up a very heavy rucksack. His cave photography became classical ; his wonderful slides are in our possession.

At the age of 53, Hastings joined the Army and served long in the East African swamps. He never resumed caving, and increasing deafness caused him to decline the Presidency

but he did much to encourage the Bradford Gritstone Club.

WALTER PARSONS.

Walter Parsons was a great Headmaster and before that Principal of the Leeds Training College, a man with a far-reaching influence and long a prominent figure in Leeds public life. With the best known side of his life we shall not attempt to deal. He was a fine speaker, a J.P., filled many offices, and received the degree of D.Ph., *honoris causa*.

All his life he loved and gloried in the hills. He joined the Club in 1896 and shared in the conquest of Rowten and other great Pots in the campaigns of the three great years '97, '98, '99. A most brilliant rock climber he led the second ascent of Walker's Gully. In 1903 he was in at Rift Pot, and through the era of the ladder descents of Gaping Gill, exploring the Booth-Parsons Crawl and the South Passage, and went down Long Kin West.

Parsons was President over the war years, 1912-19, became a member of the Alpine Club, and continued a busy and active career till his death in 1944.

ROLAND ERNEST SARGENT.

We can ill afford to lose men like Sargent in the prime of life and in the full swing of a climbing career. From Cambridge he entered the service of the L.N.E.R. and joined us in 1935. Of powerful build, he was good at games, keen and enthusiastic at work and play, and will be greatly missed by his many friends. He had done many good climbs in the Lakes but somehow fell from the Alpha climb on Green Gable and was killed at once. His grave is at Wasdale.

JOHN JEREMY BRIGG.

The survivor by seven years of twin brothers remarkable for their long careers of public service died in February, 1945, aged 83. Living for many years at Kildwick Hall, near Keighley, the brothers engaged in countless activities ; among many benefactions was the magnificent gift to the National Trust of East Riddlesden Hall.

John Brigg began public work in 1893, was 14 years a County Councillor, was elected Alderman in 1921, and did

great work on important committees and educational bodies.

A great lover of the open air, every Summer 1891 to 1914 he was in the Alps or Norway, mostly with W.A.B., Eric Greenwood and Alfred Holmes, and was fifty years a member of the Alpine Club.

He came into rock climbing in the early days and was among the first to practise on the gritstone outcrops as well as in the Lakes. The brothers were of the group of Alpine men brought by Slingsby into the Y.R.C. in 1893. They had climbed many giants and were particularly fond of long journeys and high passes. The mention of his name will long recall pleasant memories and kindly acts.

EDWARD CALVERT.

Edward Calvert was the great leader who organised the first English party to descend Gaping Gill, in 1896. He joined the Club in its second year (1894) when the Y.R.C. turned its attention to the caverns and found how little was known about them.

Had Martel known of the Club's delayed attack he would have been only too glad of their company. After Martel's famous ladder descent in August, Calvert attacked in September with rope and windlass, he and T. S. Booth reaching the Ledge (as did Birkbeck about 1848).

Next year the cable was taken through the Jib Tunnel, and on May 9th, 1896, Calvert stood on the floor of Gaping Gill, going down again next day with Gray, Booth, Cuttress, Green and Moore. A week later the East Passage was explored to the end, and thirteen made the descent.

Calvert was already an experienced mountaineer; as a student he had been one of the pioneers at Almscliff, and in 1897 was elected to the Alpine Club and made the first ascent of the Gross Ruchen with Gray. The same Summer he was the one man to get down Long Kin West and he shared the great pot-hole campaigns of the next two years, then like others he left Leeds, taking up the post of Electrical Engineer at Finchley where he died in February, 1945. For fifty years he climbed constantly in the Alps and did a great number of peaks, but unfortunately seems not to have written about them.



JOHN WARDLE



SIDNEY THOMPSON

SIDNEY THOMPSON.

One of the young and brilliant rock climbers of the day, in the succession of Parsons, Botterill, and Frankland, crashed in March, 1945, when leaving for a high level mission over Germany. Sidney Thompson's keenness and mountaineering powers were outstanding; from a start at Almscliff climbing became the mainspring of existence, and his steady, cool technique soon placed him in the front rank. He spent many weekends in the Lakes and all holidays, no day too bad to turn out early and get back late.

Elected in 1937, he had one full scale pot-hole with the Club, Juniper Gulf in 1938, and the next season at Zermatt climbed four big peaks.

Reserved till 1941, he joined the R.A.F. and spent two years at Montrose as Pilot Instructor before going on operations, receiving the A.F.C. for landing a burning plane. His astonishing use of leave is recorded in "On the Hills."

Sidney has left a great gap and we have lost a rare companion on the hills.

BLACKBURN HOLDEN.

Holden came as a guest to the G.G. camp of 1909, and showed himself a young enthusiast on caving. So much so that he had cotton ladders made in the mill, and a little later made an amazing solo descent of Gaping Gill on them, hampered by their surprising stretch when he came to climb out. Then he did a good deal with the Burrows' party, the Y.S.A. Elected in 1913, he continued active pot-holing for a number of years after the first War, and regularly attended the G.G. camps, besides paying visits to caves in France and Belgium.

With his wide experience he did much to establish the Craven Pot-Hole Club of which he was the first President.

ERNEST CREIGHTON.

Creighton was one of the few fortunate Ramblers who have spent years working in the delightful N. Riding, and very sorry he must have been to leave Helmsley. He was a great sportsman, full of life and go, cheery and genial.

For several seasons after joining the Y.R.C. in 1921 he climbed hard in the Alps, moving from point to point with O'Malley, Newton and Wright, and twice in Norway. His article in *Y.R.C.J.*, Vol. V, "Food and the Mountaineer," is a classic. The Club needs a successor to Benson and Creighton in this line.

After a serious illness he retired and died in January, 1946, just after removing to Robin Hood's Bay.

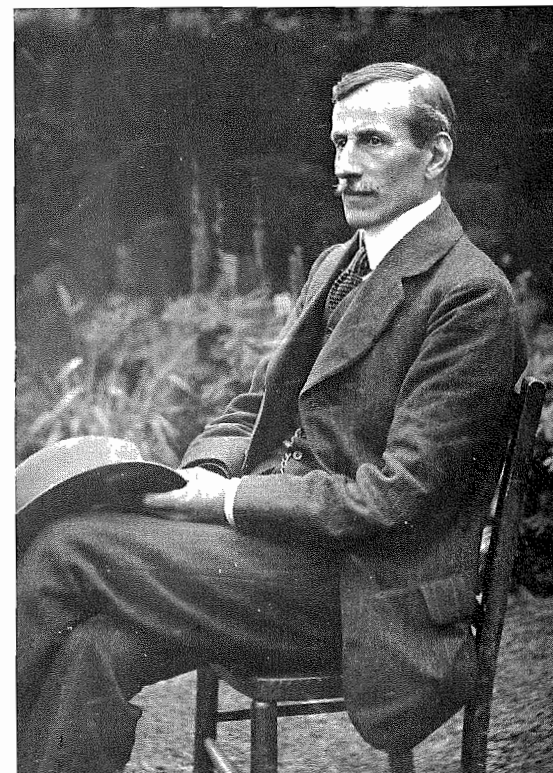
HAROLD BRODRICK.

Brodrick was a Rugby and Christchurch man. He practised as a barrister on the Northern circuit, was keenly interested in municipal affairs, and became Chairman of the Birkdale U.D.C. and then Mayor of Southport, 1912-13.

His activity and long services to the Y.R.C. were recognised by the offer of the Presidency in 1936, which his health did not allow him to accept.

An enthusiast in everything he undertook, and a first-rate geologist, it was from that angle he viewed the problems of caving. He took part in many cave and pot-hole expeditions with the Club and with smaller parties, carrying out much valuable pioneer work, particularly in the caverns of Ireland, notably such surveys as Spout Tunnel and Mitchelstown Caves. He travelled widely and never failed to record something of interest in his many articles, *e.g.* the caves of Majorca and Gibraltar.

My most vivid memories of him go back to the G.G. camps of 1909-14, when his enthusiasm and high spirits round many a camp fire infected everyone. He was laid to rest in July, 1946, in the old churchyard above Whitby town, which he loved more than any other.—A.R.



WALTER PARSONS
(President, 1912-19)



HAROLD BRODRICK
(as Mayor of Southport)

CHIPPIINGS.

RESCUE WORK AND INQUESTS.—All Ramblers should be particular when they come across pot-holing parties to make known what must be done in case of accident :—

(1) Wait till it is known whether the case is slight or serious.

(2) Then make for the nearest telephone or post office and CALL THE SETTLE POLICE. Don't call Mr. So-and-So.

In the Birkbeck Trench (A. G.) Pot accident the messenger to Settle, 4 p.m., said a man had fallen six feet. Fortunately Mr. Lord with the ten B.S.A. men available took up the stretcher. At 6.15 found the victim *in extremis*, and after a terrible struggle got him out at 8, the second message reaching Settle at 8.10. The remnant of the exhausted crowd and Mr. Lord carried the dying man in the dark to the foot of Trow Gill, car and doctor at 9.45, about seven hours after the accident, splendid work.

I attended the adjourned inquest, and am simply appalled. These things are trials without the right of addressing the jury, and the background is that of a mountaineering or motor accident. In future THE LEADER OF THE RESCUERS MUST BE REPRESENTED BY A POT-HOLING LAWYER, AND THE OTHERS BY A SEPARATE LAWYER. *It is the rescuers who are tried.*

COMPASS VARIATIONS.—Based on the Magnetic Edition of the O.S. Map of England and Wales, one-millionth scale, these are, for the middle of 1948, allowing 10 seconds decrease per year :—Settle, $10\frac{3}{4}^{\circ}$; Cheviots, 11° ; Snowdon, $11\frac{1}{2}^{\circ}$; Swansea, 11° ; Greenwich, $9^{\circ} 10'$.

Based on the Admiralty chart (North Atlantic) 3775, other places will be:—Ben Nevis, 13° ; Edinburgh and Cairngorms, 12° ; Lofotens, 2° ; Norway (Horungtinder, etc.) 7° to 6° ; Berne, 5° ; Munich, Dolomites, $3\frac{1}{2}^{\circ}$; Pyrenees, $7\frac{1}{2}^{\circ}$; Corsica, $4\frac{1}{2}^{\circ}$.

METRES AND FEET.—The easy and accurate way of changing metres into feet is not as well known as it should be, so we publish it again. The re-measurement of the standards brought a 0 into the third place of decimals, one metre = 39.370113 inches.

Hence 10 kilometres = 393701.13 inches.

Take the metre = 39.37 ins. and the error is $1\frac{1}{8}$ inches in 10 km. or $6\frac{1}{4}$ miles. Now very luckily 39.37 ins. = 40 ins. - .63 ins. = $3\frac{1}{3}$ ft. - $\frac{1}{20}$ ft. - $\frac{1}{400}$ ft. Hence to get the height of a mountain off a foreign map, add 0 to the metre number and divide by 3. The result is from 100 to 250 too big, so divide the metre number by 20 and subtract. You are now only a few feet out, and the next step will give you the exact number of feet.

By this trick, elaborate tables compiled with much labour, can be corrected in a few minutes.

WITH KINDRED CLUBS.—G. Winthrop Young (Hon. Member) was President of the Alpine Club 1941-2-3. W. Allsup has been Vice-President of the Himalayan Club.

Clifford Chubb, our President in 1946, was made Membre d'Honneur of the Société Spéléologique de France, and Monsieur R. de Joly, President of the French Club was elected Honorary Member of the Y.R.C. at our last General Meeting.

N. P. Elliott during his service in South Africa was most kindly and hospitably received by the Mountain Club, and made a temporary Hon. Member.

THE LAKE DISTRICT.—The battle in defence of Lakeland grows severe. The Services have dug up ancient Acts which ought to be recast, and it looks as if Martindale was going to be lost to the public. The threat of the mines to Ullswater is still extremely serious. Although there are at least three western valleys suitable for reservoirs, the industrialist prefers to seize upon Ennerdale Water. Wastwater will be the next to go, no lake so easy to dam. We may yet see Wastdale flooded up to Burnthwaite. Zoning and solemn undertakings given no longer count.

Recent legislation of a complex character threatens to diminish gravely public rights, and endows Ministers with extensive dictatorial powers. Far too heavy a load is being thrown on the watchfulness of private societies.

THE DEEPEST GULFS.—Our French friends have been able to do some pot-holing during the War, and in 1941 Chevalier, Petzl, Dubost, Guillemin, and Mdme. Chevalier had the remarkable success of going beyond the furthest point, 870 ft. deep, in the Trou de Glaz down into the Guiers Mort at 1,030 ft., 381 ft. above the entrance to the latter.

Thus the *Trou de Glaz* appears to be now the seventh deepest cavern explored, the list given Y.R.C.J., VII, p. 67, being now (1) *Spluga della Preta*, 2,090 ft.; (2) *Antro della Carchia*, 1,775 ft.; (3) *Abisso di Verco*, 1,758 ft.; (4) *Abisso de Montenero*, 1,575 ft.; (5) *Tonion Schacht*, 1,542 ft. (6) *Grotta Bertarelli*, 1,476 ft.; (7) *Trou de Glaz and Guiers Mort*, 1,401 ft.; (8) *Abisso di Clana*, 1,378 ft.

The deepest caverns in France are:—

Trou de Glaz (Chartreuse), 427 m. = 1,401 ft. (*Spelunca*).

Gouffre Martel (Ariège), 303 m. = 994 ft.

Trou de Heyle (Basses Pyrénées), 250 m. = 820 ft.

Grotte des Eaux Chaudes (Pyrénées), 234 m. ascent = 768 ft.

Chourums Dupont et Martin (Vercors), 216 m. accurate = 709 ft.

Gouffre de la Combe de Fer (Isère), 216 m. = 709 ft.

Grotte de la Luire (Vercors), 213 m. = 699 ft.

Aven de Hures (Lozère), 205 m. = 672 ft.

Gouffre de Paradis (Doubs), 204 m. = 669 ft.

Aven d'Orgnac (Ardèche), over 200 metres.

MICKLE, MEIKLE, MUCKLE.—Readers of Scott are familiar with the frequent alternatives, *mickle* and *muckle*. Owing to the lengthening of short sounds so popular in the present age, *mickle* in Scots to-day appears mostly as *meikle*. In the North of England it ceased within the nineteenth century to be a living word. In English place-names *muckle* appears as *much*.

Scott died in 1832 and his novels had such tremendous popularity that it can have been only after 1850 or 1860 that the cockney proverb "many a mickle makes a muckle" (not to be found in any book of reference) began to pass for Scotch. Some literary researcher might usefully trace its earliest appearance. Nowadays it puzzles the youthful and even

takes in Scotsmen. In fact it is an excellent test whether a man knows much Scots or is just posing.

In place-names Mickle is frequent both in England and Scotland, but it is surprising how rare is the complete pair, Mickle and Little; Much and Little is much commoner. Mickle Fell and Little Fell will occur at once, Micheldean and Little Dean, near Derby Mickleover and Littleover. In the Campsies are Meikle Bin and Little Bin, on Lochnagar Meikle Pap and Little Pap.

A final thought, why does "Big" never appear in a British place-name, always "Great." The answer is that "big" with its slightly comic touch is of unknown derivation, appeared in English first about 1300 and was centuries in coming into general use.

GILL OR JILE.—To the ordinary Briton spelling is a deep mystery, and any straightforward spelling is wrong as so humorously laid down by H. G. Wells. Only thus can one account for the multitude who love the rugged spelling "ghyll." I was never able to find any early use of "ghyll" and therefore stood firm against its use in the *Journal* except for G.G. on special pleas from founder members. That became Gaping Gill as soon as I found no trace of the rugged form in any Place-Name volume, and I was justified by finding in Murray's great English Dictionary—*GHYLL*, *invented by Wordsworth, used only in guide-books to the Lake District*. Map makers use *gill*, and it is suggested that "ghyll" implies a charge for admission, or the sale of refreshments.

Except in two words, curious survivals of Caxton's endeavour to introduce Dutch spellings, *h* alters the sound of the letter before it, usually to *f*, and *jile* is really quite a good shot at "ghyll," made by an unhappy broadcaster. To round off this, English *g* and *c* are only pronounced as *j* and *s* in words of foreign derivation. Welsh and Gaelic also stick to *g* and *c*, as in Precelly, Ceiriog, Gillie, Cioch.

PHREATIC AND VADOSE.—There is a new extension of the theory of formation of caves, applying to areas where underground erosion has no relation to surface form. Its battle cries are "phreatic" and "vadose." The latter is "shallow";

"phreatic" is "tank" and applies to caves under water level where the limestone as in Majorca dips into the sea, or a lake.

Problems of pot-hole formation in England and France are simple. It is otherwise in America where any number of gigantic cave labyrinths exist; 350 miles of passage are spoken of, *i.e.* 70 miles applying the factor of safety. Any bed of limestone must have been up and down several times to admit of strata being laid down on it, and when thousands of feet down all passages would be crushed in. Still the new view is that much erosion occurs under water.

BIRKBECK CENTENARIES.—Mr. John Birkbeck, senior, of Anley, Settle, one of the Alpine pioneers who reached the highest point of Monte Rosa in 1855, was earlier interested in the pot-holes. He led the first descent of Alum Pot in 1848, and was lowered to the Ledge in Gaping Gill probably in 1849. These feats are mentioned in Howson's *Curiosities of Craven*, 1850, and in two other books of 1852 and 1866.

The Birkbeck Trench is thus almost a hundred years old.

THE CLUB JUBILEE.—In the middle of the War, in October, 1942, the Yorkshire Ramblers' Club had been founded fifty years. It was impossible to celebrate this as we had hoped and as other Clubs have done, nor indeed would it be possible in these stringent days. The founders and other great leaders have passed from us as the years have rolled on.

It is interesting to look through the early Reports; Leach, Constantine and Leonard Moore appear in the first list, Gray in the second. Leach, President 1925-7, was an officer in the second year; Gray, the first Editor, President 1931-2, was on the third Committee, and Constantine was a Secretary from the third year right away to 1921. Those who have been members a mere thirty years or so owe a great deal to Constantine for making them realise they had found their spiritual home.

ON THE HILLS.

1938. *Himalaya*.—F. S. Smythe again reached Camp Six on Everest, as one of Tilman's lightweight party of seven from Britain. Conditions were very severe with no good interval before the monsoon, and the E. side of the North Col so dangerous the attack was diverted to the W. side. In the forced retreat with a paralysed man the E. side had to be used again, luckily without disaster.

The Alps.—Watts was ski-ing at S. Anton in February. Davidson had good weather and a successful time in the Maderanertal. Harold Booth made the very fine traverse of the Klein and Gross Simelistock. Thornton and White did the Weisshorn, Matterhorn, and Zinal Rothorn. Nelstrop in addition to some strenuous failures, climbed the Petit Dru, Requin, and Moine. E. E. Roberts and Rigg climbed the Boktschingel, Claridenstock, were beaten off the Todi, and in two weeks of continuous cloud managed the Sonneg Wichel and Salbitschyn. At the latter hut occurred that rare event, theft of food. Slingsby visited the Jura, Engstlen Alp and Joch Pass. W. M. Roberts and friends made the tour of Mont Blanc as far as Col Ferret, which was closed by the local Swiss to keep out foot-and-mouth-disease. At Zermatt they found very few climbers. Sale, Reed and Evans from Bel Alp climbed Fusshorn, Nesthorn, and Mönch.

Norway.—Beetham spent some time in the Lofoten Islands but had no good weather. Goggs had a walking tour in Jotenheim. Godley and Wardle were ski-ing in March at Finse—had much rain, which never comes that month!

At home Sidney Thompson continued to select the stiffest routes on British crags. At Easter E. E. Roberts was in the Teallachs and Cairngorms and was led by J. H. B. Bell up a new climb on Sgoran Dubh, while Platten took 26 people into Dan-yr-Ogof in dry weather wading the Third Pool. In the W. Highlands Crawford visited Mull and Glen Etive, D. Burrow reached Uig (Skye) and saw the Quiraing, Botterill and Woodman were yachting along the coast.

1939. Lawton at Wengen and Thornton at Lech in Arlberg were ski-ing at New Year. Catlow did the Jungfrau, Mönch, and Eiger in the first week of January and had a good fortnight

ski-ing. Later on Godley and Wardle had also good sport in Norway.

Zermatt was very popular. Evans did the Matterhorn; Fred Booth and Marsden Dent Blanche and Dom; Sidney Thompson, Monte Rosa, Matterhorn, Rothorn, Dom, Rimpfischhorn. Thornton got the last two and the Allalinhorn and was only induced to return home in haste with great difficulty.

Smythe had a strenuous three weeks in Dauphiné and the Mont Blanc range, making a four days' high level traverse from the Trélatête and down the Brenva face.

Nelstrop was out a week and climbed the Matterhorn; in August he did all the 3,000 ft. peaks in Wales in 26½ hours; New Year's Eve he spent in a tent on the top of Snowdon. He had bivouacked there at the end of '37 and put up a tent in a storm high on Crib y Ddisgl in the last hours of '38.

On Christmas Eve between 2 p.m. and midnight S. Thompson and friends crossed from Aviemore to the Shelter Stone by the Larig and the March Burn, favoured by bright moonlight and good snow. Thence to Cairn Toul and the Corrou Bothy, thence by Devil's Point to Glen Einich Bothy.

1940. Nelstrop was very successful at Easter, on Ben Nevis, Observatory Ridge, Raeburn's Arete, etc.; variation left of Route 1, Rannoch Wall (Glencoe), Church Door Buttress, Cioch Direct, Kelly's route to Sgumain, White Slabs (Coire Ghrunnda).

Sidney Thompson was active in Skye till driven away by hot weather and midges. Fred Booth and E. E. Roberts in September walked over the Maiden Way to Alston, becoming convinced that this Roman road over the Pennines cannot have been a cart road. The little known seven miles of the range was then followed from Gildersdale to the N. end of the Pennines, Cold Fell.

1941. Slingsby was at Aviemore in May, and bagged the four great Cairngorm mountains; W. M. Roberts from Braemar in July bagged Lochnagar and Ben Macdui. Rigg and E. E. Roberts had some good climbing from Rosthwaite in marvellous summer weather, such as we have not had since.

Sidney Thompson in September with his wife climbed

Gardyloo Gully (very dry), Carn Dearg Route 1, a possible new climb on No. 3 Gully Buttress, Crowberry Ridge, and the Chasm (Glence). In a November week-end from Grantham they arrived at Aviemore 4.30 a.m., cleared the forest in the dark 9 a.m., and bivouacked in a ruin N. of Bynack Lodge; could not leave till daylight at nine, down Glen Tilt to catch the night train, 7 p.m.

1942. Slingsby in July had two days on the Cruachan group, did Ben Lui, then early train to Corroul station, over Ben Alder and by Lock Pattack to Laggan Hotel, a tremendous distance.

1943. In June Reed and Sale climbed from Rosthwaite, found Moss Gill worthy of its name and Tennis Court Wall green with slime. The Booths and Falkingham had an August week among the Cairngorm summits, spending two nights at the Shelter Stone.

Sidney Thompson was stationed for two years as R.A.F. instructor at Montrose and made energetic use of all the leave he could get. Besides Glens Isla and Clova, he made longer expeditions with Mrs. Thompson and was surprisingly well received everywhere. February.—Braemar to Derry Lodge; forced by gale down to White Bridge, bivouac Geldie Lodge ruin; down Feshie to Kingussie; train Dalwhinnie, past Ben Alder, over Beallach Duibh, in the dark to Loch Ossian Y.H.A.; four nights in Ben Nevis hut, storm, stove would not light. June.—Cycle Lairg to Inchnadamff; Ben More Assynt round; Quinag, Barrel Buttress, to Lochinver; Suilven, W. face and ridge, four hours cycle with sacks to Achiltibuie, 11.45 p.m.; Coigach ridge, bad day; Stac Polly, West face, rain, Dundonnell 9 p.m. via ferry; An Teallach, 14 tops, bad afternoon; Ullapool; Seana Braigh, Creag an Duine ridge; pushed cycles against wind to Alltguish; Ben Dearg, Cona Mheall; Fannich peaks. Hotels booked in advance. July.—Not a cloud for eight days. Cycle to Kinloch Bervie (new hotel); Foinaven; Arkle, S.W. face, cycle to Scourie; Ben Stack; Handa and Durness; cycle to Cape Wrath; to shepherd's, S. of Loch Hope; Ben Hope, Bell's N. face climb; Ben Klibreck; Ben Loyal. "Amazing coast, best district in Scotland."

1944. January.—Dreadful week, Ben Bheithir (Vair),

three nights in Nevis Hut. In March over in Ireland he was hospitably welcomed by our good friend, Mr. Barbour, and made a tour of the Marble Arch group of caves. April, Ben Nevis Hut, No. 2 Gully, N.E. Buttress (glazed), Gardyloo ice pitch cut up, 45 ft. from cave. June, Skye Ridge, 24 hours Glen Brittle to Sligachan.

August, Cioch Direct, White Slabs, Crack of Doom, Alisdair Central Gully and Collie's Climb. Helped by a good day and knowing the three rock climbs Thompson then did the whole Ridge and Blaven in 20 hours 20 minutes solo. Times: Glen Brittle 4.50 a.m. (dark), Garsven 7.20, Alasdair 8.55, Inaccessible Pinnacle, 10.05, Bidein 12.50, Bhasteir Tooth, 2.30 p.m., Sgurr nan Gillean 3.0, 20 mins. rest, Uamha 4.05, Foot of Blaven 5.30, Blaven 7.00, Loch Scavaig 9.30, Glen Brittle 1.10 a.m. (very dark).

Autumn, 12 days in the Hebrides, three steamer trips. Uig (Lewis), three days, Raonassgill, Mealsval with interesting slabs. Tarbert (Harris), three days, Clisham, Laxadale Hills, Loch Boisdale (S. Uist) poor hotel, Ben More, sunshine above sea of clouds.

Stringer took a detachment of troops in training over the highest Syrian mountain and Chadwick ascended a peak near the Gran Sasso in Italy. The Booths and Falkingham climbed many Munros from the Spital of Glenshee and spent one night in the heather.

1945.—At Easter F. and H. Booth, H. L. Stembridge and E. E. Roberts went to Loch Troolhead in the singular hills of Galloway, and climbed Curleywee, Merrick and Kirriereoch. Later the Booths climbed from Capel Curig, and Ellis and the brothers Roberts were at Cautley, the most interesting expedition being over the Calf to Simon's Seat.

Sale and Reed for a second year had a walking tour in the Pennines and found accommodation in the most lucky manner. Rigg has done much in S. Wales, including the ridge over the Brecon Van to Carreg yr Ogof.

Hilton had marvellous weather in August at Bridge of Orchy, climbing Achallader, the Sron na Creise-Clachlet-Stob Gabhar ridge, and others.

1942-44.—All the above seems very small beer beside the innumerable ascents, treks, and bivouacs of F. S. Smythe in

command of Mountain Warfare Training Schools first in the Cairngorms and then in the Canadian Rockies. See *Alpine Journal* May and November, 1946. Living out in the open in snow-holes and tents in the Highlands in the Winter of '43 was more severe and trying through damp and wind than the low temperatures and dry air of the Rockies in '44.

W. E. Evans was also instructing in Mountain Warfare in 1943 in Syria among rocky dry hills, mostly limestone, and deep gorges, before his regretted death when reconnoitring.

1946.—Nearly every month of the War years broke a record, good or bad. One year February had 95 hours sunshine (far over average) and August 95 too, less than half the average. Last Summer kept up the habit on the wrong side.

F. S. Smythe had a magnificent year. Five bad weeks in Switzerland, terrific snow at the end of March, three good weeks. He made the High Pennine traverse on ski with Beloeff, Cima di Jazzi to Rosa Blanche, and went on alone through the Oberland from the Galmilücke via Finsteraarhorn to Goppenstein station, quite safe owing to the huge snowfall.

In the Summer out to Canada, where he found a fine range unclimbed and made seven first ascents there. Much heavy back-packing, more climbing round Mt. Robson.

Harold Booth went to Saas Fee, camping, and climbed Lenzspitze, Nadelhorn and others.

White was in Provence in July, grand weather, and most happily got in touch with M. de Joly, who took him and Mrs. White down the grand Aven d'Orgnac. Also they followed the Gorges of the Verdon, 22 miles, sleeping out one night.

The rest of us unwisely stayed in Britain. Beetham and Burnett had a grand caravan trip to Arrochar and Glencoe hills. Nine were on Ben Nevis at Easter. Hilton did Lochnagar and Ben Macdui from Braemar, whence the Editor did Beinn a Bhuid and with his brother various Munros. Chadwick and Blair had good fortune at Glen Brittle, climbed almost all the ridge and had a long climb on Clach Glas.

Platten and Rigg were in Dan yr Ogof at Easter, dry conditions, only three hours needed for the cavern beyond the pools. Rigg was in the second visit to the newly dug out Ffynnon Ddu, and after a week with Marsden at Glyn Tawe, went on to the grand Great Tynings Cave.

CAVE EXPLORATION.

The Golden Age of pot-holing is over long ago, but digging has had some extraordinary successes, and a large number of minor caves have to be noted also.

I.—NEW DISCOVERIES.

Fermanagh, Florence Court, Pollnagollum (of the Boats) (alt. 610 ft., 200 yds. N.E. of Legg Farm on path from Marble Arch to Pollasumera).—31st July, 1938. Fred Booth, Gowing, Nelstrop, Marsden, Godley, E. E. Roberts. From the open pot 24 ft. ladder through a small hole into a chamber; through another tight hole to a stream. A few days later the rubber boat was used on a pool 50 yds. long, but the party were checked by a third curved pool. May, 1939, parties of six and four with two boats went to the end, 700 yards, three-quarters of the way to Pollasumera. Four fine side ascents almost to the surface.

Fermanagh, Rourkefield, Pigeon Pots (alt. 1,000 ft., 300 yds. S.W. and N.W. of Legacurragh or Leg-na-Hurry, a nick in the E. escarpment of Cuileagh, 2 miles S.W. of Rourkefield, which is not named on O.S. map, 2 miles S. of Florence Court).—August, 1938. Gowing, F. Booth, Godley, Marsden, Roberts. —No. I, large open pot, 36 ft. ladder, greatest depth 83 ft. No. II, rift with waterfall. 36 ft. ladder. In darkness twenty foot climb and second ladder pitch, 74 ft. Total over 140 feet depth. No. III, to N.W., fine large pot-hole with trees. Steep slope to 24 ft., then 80 ft. ladder, at foot to the N. a fine ascending chamber.

The three are obvious from the W., but not easy to find in a maze of shakeholes from Legacurragh.

Fermanagh, Knockmore, Reyfad Pot (alt. 990 ft., air-line half-a-mile S.W. of Pollanaffrin).—May, 1939. Marsden and E. E. Roberts. Open pot, 37 ft. A short passage leads to a huge shaft, estimated at over 150 ft. deep. The second really deep pot-hole found in Ireland.

Knockmore, Murphy's Hole (alt. 980 ft., 1,500 yds. S.E. of Reyfad Pot).—May, 1939. Marsden and Roberts. An easy 50 ft. climb. *Rattle Hole*, not far off, a fine rocky 70 ft. shaft, has to be climbed down vertical chimneys, and was not quite

finished, needing a ladder. The description of Praeger's descent does not fit.

Clare, Shieve Elva, Pollnagollum (Baker's) and Pollbinn. First visit, 1880, Westropp, Joyce, Christy. Names to be seen at 537 yds.—1942-3. Messrs. Coleman and Donnington have added greatly to the part of this very long watercourse above the main pot, notably the Long Gallery, 800 yds., making a total of 2,450 yds. for the Pollbinn series. Their survey, a magnificent feat of many days, has been carried down the main cavern 2,137 yds. to the pool which stopped Baker in 1925. Neither they nor the Hooper-Carhill party in 1939 found the bypass and the "throat" used in 1936 to regain the river, but both visited a passage 100 yds. back, and the former, dry passages lower down. Total of survey, $3\frac{1}{4}$ miles; total known, nearly $3\frac{3}{4}$ miles.

Ingleborough, Gaping Gill, Flood Entrance.—August, 1909. The names, not hitherto recorded, of the first parties to exchange places on the final 125 ft. ladder climb, were C. E. Burrow, Davis Burrow, O. Stringer, R. F. Cook, E. Simpson and W. H. Greenwood.

This remarkable discovery was picked out in 1908 as being the only possible place where a connection could exist with the internal Two Hundred Foot Pot, and much work was done to force entrance in confidence in the soundness of this deduction.

Gaping Gill Hole, Amphibian Crawl.—June, 1938. Nelstrop and Matheson penetrated 148 yards into a wet bedding-place, on the left at the start of the short crawl to the landing place of the Two Hundred Foot Pot, and must have been close to the Hensler System, which was reached by Nelstrop and Fred Booth the day before.

The *Boulder Chamber Pot* owing to movement of the rocks was found only after a long search, and next day the second descent was made by Wardle, Rigg, Godley and Roberts. In spite of loose rock, Rigg crossed the top of the lowest pitch and found another shaft beyond.

Gaping Gill through Disappointment Pot.—In 1944 Mr. R. D. Leakey, B.S.A. crawled, totally immersed, through the water at the end of Disappointment passage. The floor has been worked on since and a way forced into a four pitch

passage, the deepest and last being 45 feet, into the Hensler system. A very fine discovery.

Ingleborough, Birkbeck Trench (A.G.) Pot (alt. 1,325 ft., in the conspicuous sink 100 yds. E. of where the Trench scrapes over the ridge to the wall).—1943. Opened out by Mr. A. Gemmell. Narrow going, $\frac{1}{4}$ mile, 250 ft. depth in all, pitches of 45, 10, 33, 10, 15, 20 ft.

Ingleborough or Clapham Cave.—1938. Craven Pot-hole Club men estimate that they made 250 yds. painful crawl in the dry bedding plane off the stream below the Giant's Hall.

Kingsdale, Simpson's Pot, nr. Rowten.—Easter 1940. B.S.A. parties. Small entrance, long wet crawl to a "siphon" at 165 ft. depth. Opening enlarged by drill and hammer. April 27th, Messrs. R. D. Leakey and H. Burgess dived through. Later the exploration was carried into the final passage of Swinsto Cave, 395 ft. down.

Leck Fell, Lost Johns' Cave.—July, 1938. Douglas followed a crawl in mud and water, 18 inches high, off the Master Cave, and later Messrs. Weaver and Shaw think they went as much as 600 yds. in it.

Penygent, Hull Pot.—The immense slab which early in 1924 split off and filled the W. end of the pot so that one could climb out as late as June, 1939, was found in 1941 to have collapsed in ruins and left little sign of what had happened. A classic instance of the way in which pot-holes are enlarged.

Horton-in-Ribblesdale, Stot Rakes Cave (alt. 1,225 ft., the rising of a beck crossing the wall running W. 200 yards from the last stiff ascent on Hull Pot Lane).—June, 1939. J. C. Addyman and E. E. Roberts. Cave containing queer muddy stalactites, all unbroken, 100 yds. long.

Horton, Whitber South Cave (alt. 1,300 ft., almost due N. of the above, by the next wall, which runs to Hull Pot Gate).—December, 1938. Burton, Rowe, Emmott and Procter. Interesting journey to a belfry, 40 ft. high, with a twin from which, once in, it is hard to get out.

Feizor, Huff's Pot (alt. under 900 ft., hard to find, small stream sinks near a cluster of rocks).—July, 1938. Messrs. Huff and Bottomley, 70 ft. deep. A singular discovery. Not very safe.

Wharfedale, Litton Upper Shaft (straight up from Litton

through the stile above the Foss to Litton Pot, 16 ft. deep, then 70 yds. uphill.—1939. Rigg and Roberts. Covered over. Hand line and climbs to 38 ft. depth.

Wharfedale, Mossdale Sink.—1941. Mr. Simpson's parties forced an entrance into a cave system of which $3\frac{1}{2}$ miles are stated to have been surveyed. It must be tackled with caution. A Y.R.C. party in 1946 failed to get in, probably on account of the high water.

Widdale Fell, Blackside Pots (alt. 1,850 ft., either side of the county boundary wall, N.W. from Little Tarn).—1938. Mr. Fairbank (Craven Pot-Hole Club), later Gowing and Roberts. Small pots in a line of limited extent, deepest 35 ft.

Westmoreland, Great Asby, Pate Hole (Half-a-mile up the dry valley from the village, R. bank).—August, 1941. Gowing and Rigg. 322 yds. of remarkably wide cave, 5 ft. high, to a pool in a lofty belfry; 35 yds. on, another pool across which Rigg swam. A parallel passage with two cross-overs leads back.

Nidderdale, Goyden Pot.—1944. Mr. Francis and party, P.O. engineers, paid many visits and extended "Break Through Possible" by 70 yds. of high passage.

October, 1944. Mr. F. G. Balcombe made a daring and successful *crawl* under water of 100 ft. into the Lower River Passage. Neither party could find the dry bypass claimed in *The Yorkshire Dalesman*.

Derbyshire, Castleton, Giant's Hole.—A new passage has been found, see *Rucksack Journal* for 1939. The lower storey of *Eldon Hole* was opened up again in 1941.

Somerset, Blackdown, Great Tynings (G.B.) Cave (alt. 865 ft., 200 yds. S. of Shipham road from Charterhouse to Shipham, 500 yds. E. of Tynings Farm).—1939-40. Messrs. Goddard and Barker broke through in November in an area where much digging has been done, and in March, 1940, reached a magnificent cavern, a gorge descending in a big zigzag from 180 ft. depth to 480, length from the surface 500 yds. Its size is amazing considering the small streams entering.

Somerset, Burnington Combe, Sidcot Swallet.—1925 and 1941. A dig by Sidcot School into narrow rifts, old part 67 yds., new part 40, impracticable to a full grown man.

Charterhouse, Longwood Swallet (alt. 750 ft., S. of Lower

Farm).—1946. Brothers Stride. Another successful dig into narrow rifts which go down 330 ft. steeply with pitches of 42 and 33 ft. into a large chamber.

Sutherland, Inchmadamff, Cave of Roaring.—1939. Mr. W. Fairbank in the second chamber broke a way through into a considerable cavern with a burn which must be above the *Cave of Water*. Rigg had previously been down the great slab in the latter.

Devon, Buckfastleigh, Bakers Pit.—1938 on. An intricate system of caverns of considerable length has been discovered and explored by Messrs. Reed, Joint, Carhill and Mr. and Mrs. Hooper.

Breconshire, Glyn Tawe, Dan yr Ogof (alt. 700 ft.)—The second full expedition in 1937 over the Pools was actually made by Mr. T. A. Morgan's Welsh party. No great additions have been made though the High Belfry has been climbed into a short passage and a curious bypass found in the roof of the old south passage. The splendid cavern up to the Pools has been developed and when opened in August 1939 had 5,000 visitors the first week.

Pen-y-cae, Ffynnon Ddu (L. bank of Tawe below the Penwyllt road).—Easter 1946. Messrs. Balcombe and Sheppard in diving equipment found the pool 10 ft. deep and 15 yds. long.

Ogof-yr-Ffynnon Ddu.—August 1946. Messrs. Nixon and Harvey sank a 15 ft. shaft above the rising and found a half-mile passage carrying a swift stream and a dry upper system with very fine stalactites. Rigg was in the second visit. More has been discovered.

Pant Canol Cave (a little higher still).—August 1942. Entered by Mr. Powell; Mr. Ashford Price pushed through to a lofty flooded chamber and made a boat voyage of 27 yds.

Penwyllt, Cwm Dwr Quarry Cave II.—July, 1938.—Doyle and E. E. Roberts dug away 4 ft. of hard shingle, and later a party led by Weaver (not Doyle as stated) put down a ladder and found a fine little cave like No. I.

Penycae, Craig-y-Nos Quarry Cave (on the left of the first quarry 50 ft. above the green road). August 1938. Mr. Ashford Price. Restricted, with a loop and a bad crawl to running water. 68 yds., now dug to 95 yards.

Caermarthenshire, Foel Fraith, Pwll Swnd (alt. 1,800 ft., W. of Twrch, on N.E. slope of Foel Fraith, very hard to find). Easter 1939. Miss Tudor and Mr. A. Hill were led to it; next day with Platten a rift 20 yds. in was hammered open and a desperate squeeze made on to a 32 ft. ladder climb. A fine passage of 400 yds. was found, with a close so disappointing no account has been written.

Rigg hunted for Pwll Swnd three times in vain, and finally neither he nor Hill could get through the squeeze.

Arthur's Pot (200 yds. E.).—35 ft. ladder into a rift 100 ft. \times 10 ft.

Brecon, Penderyn, Ogof Fawr (alt. 1,075 ft., swallet of Pant Sychbant, $2\frac{1}{2}$ miles E.N.E. of Penderyn Church). Easter 1939. Messrs. Weaver, Harvey and others after eight hours' work broke into a fine stream passage down a 20 ft. fall. Not extensive.

CAVE DIVING.—Mr. F. G. Balcombe has again put in much work and thought on diving equipment. In 1945 he penetrated Keld Head 70 yards, and in Alum Pot went 20 ft. down into the Sump, visibility twelve inches. At Wookey Hole, October 1946, progress was made into the Inner Chambers along a route which seems to bypass the Seventh Chamber. In Goyden Pot his enthusiasm had a definite success.

II. OTHER EXPEDITIONS.

Ingleborough, Juniper Gulf.—The last pitch is 132 ft. plus 12 ft.

Nick Pot.—The ledge on the great pitch is a large and comfortable recess, 66 ft. down, with 180 ft. vertical below it.

Hardraw Kin.—A party of five in 1941. The pitch is 83 ft. deep and there is a shale bed very clear at the top, 8 ft. up.

Wharfedale, Beckermonds Cave (alt. 1,065 ft., S. bank, half-a-mile above Beckermonds at the first bend). 67 yds. long, parallel to the beck.

Coverdale, Otter's Cave.—Mentioned and misplaced by many books, quite unknown to the local people, except keepers. R. bank, opposite Melmerby, in the open by the river above a thick wood, 200 yds. below a footbridge. 80 yds. wading, last third in a dull chamber, 30 ft. wide, 15 ft. high.

Middleton-in-Teesdale, Jack's Scar (one mile up the Hudeshope Beck, on L. bank of a short gorge).—About 100 yds.

Langdon Beck, Moking Hurth (alt. 1,620 ft., 1 mile E. of Inn).—In a quarry, easily missed. A series of right-angled rifts. Last 65 yds. difficult.

Glyn Tawe, Fan Fraith (or Pont Mawr) Pot (close to the swallet of an unnamed beck, $\frac{1}{2}$ mile W. of Nant-y-Moch, 1 mile E. of Pwll Byfre).—Neither name is satisfactory. 56 feet from the lip. Passage measured, 160 yds., bearings 160° and 180° (true).

Llandeilo, Llugad Llwchwr.—Platten has made the happy discovery that H. T. Jenkins, 1841-44, explored the cave and used a coracle, which he must have dissected and rebuilt inside. Platten has used rubber boats there and Rigg and Roberts did so in May.

Two interesting little caves, noted in books, are Dogholes, Warton near Carnforth, and Eglwys Faen Cave near Crickhowell.

In Mitchelstown Old Cave Arthur Young's passage and inscription (before 1800) have been rediscovered, first by Puttrel's party 1910.

REVIEWS.

EDWARD WHYMPER: by F. S. Smythe. (*Hodder and Stoughton*, 1940, 330 pp., 24 illustrations, 21s.) This biography adds greatly to the pleasure of reading Whympers' books; now we get the various parts of his career in perspective. One does not have to use the internal evidence of his works to piece them together.

Whympers was a fine artist and a very lucky young man, for at twenty he was sent out by Longman's for eight weeks to make sketches in the Alps particularly of Dauphiné. He covered an enormous amount of ground, but his first mountaineering season was 1861, the first ascent of Pelvoux and the astonishing camp on the Col du Lion. After sweeping to and fro' among the great peaks, he was only 25 when he climbed the Matterhorn. Life was precious in those days, and the grief of a lifetime is the key to Whympers' later years.

The accident held back mountaineering for half a generation, but had all gone well we cannot doubt that Whympers would have headed the movement for many years. Not till 1874 did he climb the peak again, and only after thirty years did he revisit the Italian Ridge. The 1879 expedition to the Andes was a great series of efforts in his early style. A very welcome book.

BRITISH HILLS AND MOUNTAINS: by J. H. B. Bell, E. F. Bozman and J. F. Blakeborough. (*Batsford*, 1940, 120 pp., 8s. 6d.) As one would expect Bell has written an accurate and interesting and

valuable account of Scottish mountains and of the Cheviots and the book is finely illustrated. But he has been let down. Fairfax Blakeborough's line of country is not the Pennines. Neither the Derwent, Esk, N. Tyne or Coquet rise in the Pennines, nor do the latter stretch to the Highlands. Bozman on Lakeland is generally sound but on Wales he opens with amazing stuff on gloom, enveloping spirits, and fear of going alone which one associates with Highland writings and not with cheerful and vigorous Wales.

NORWAY, THE NORTHERN PLAYGROUND: by W. C. Slingsby. (*Basil Blackwood, revised edition, 1941, 227 pp., 7s. 6d.*) The new edition by Slingsby's daughter restores the original order of his explorations and first ascents, also making some omissions. "A prophet has no honour in his own country—" and there is no great Yorkshireman of whom the Press seem to know less than Cecil Slingsby. In its shorter and cheaper form we hope that the delightful book may have a wide circulation, and make Yorkshire townfolk realise why in Norway he was the only Englishman ordinary people had ever heard of.

BRITISH CAVER, Nos. III-XV, 1938-46 (formerly *Journal of the Mendip Exploration Society*).—Printing is a hobby of Platten's so that in the last nine years he has turned out thirteen numbers of about 80 pp. each, containing notes and extracts about caves from a huge range of books, besides articles and plans sent him. He takes no responsibility, thus his contributors are sometimes amusingly ill-informed, the plans magnetic north undated. Valuable records are small caves in Ryedale, Hooper's caves in Devon, cave diving, and the surveys of Swildons II and Llugad Llwhwr, but Platten's great success is the discovery of H. T. Jenkins' visits to the latter and use of a coracle in 1841-8! Platten is a real enthusiast.

SPELUNCA (*Bulletin de la Société Spéléologique de France, No. IX for 1938 and No. X 1939-43*) and ACTES DU CONGRÈS NATIONAL, 1939.—Both numbers are in the main brief notes of an amazing number of cave explorations with a few more detailed accounts and technical articles. In X, which covers five war years the volume of work is naturally less, but the descriptions bear striking witness that caving in France did not suffer complete eclipse. We take off our hats to our French colleagues for carrying on under adverse conditions.

In summarising the Society's activities, R. de Joly mentions still further discoveries in the great Padirac, and more details are given by G. de Lavaur who describes the effects of improved lighting. Several pages are devoted to British caving, and we note with amusement that the reviewer of our *Journal* failed to grasp that the coracle was used in Dan-yr-Ogof in 1912; he thinks that we found the rubber boats inadequate and so took to a type of craft recalling that to which Moses was entrusted on the Nile.

In Spelunca X perhaps the most interesting article is that by P. Chevalier on the exploration of the Trou de Glaz and its continuation, the Grotte du Guiers Mort, both a few miles north of Grenoble. These caves have been proved to be joined after a long series of expeditions

from 1935 to 1941. Together they form the deepest cave in France, total depth 1,400 feet; altogether over 5½ miles of passage have been explored and the total of laddered shafts amounts to 3,300 feet.

In the report of the First Congress, we find articles by Bernard Gèze on the effect of geological structure on cave formation; by P. Chevalier on the deepest gulfs of France; and various papers on bone-caves and stalactite formation. A. Fontanilles suggests that stalactites and stalagmites are not formed in the usually accepted manner. Instead of the calcium carbonate being precipitated from solution in the percolating water by the release of carbon dioxide, he suggests that the chalk is in suspension in the form of minute crystals which have been picked up by the water while percolating through the limestone beds; the smaller particles rise to the top of the drop and are left to form the stalactite, while the larger fall with the drop to form the stalagmite. Moreover, at the moment of separation of the drop, some of the particles are scattered and float about in the air of the cave, ultimately being deposited on the walls to form the queerly shaped concretions so often found.

He argues that if the accepted theory is correct, one would expect to find an increase in carbon dioxide concentration in the air at the end of *culs-de-sac* where stalactite formation is actively in progress; one would also expect the water to be cloudy from precipitating chalk. In support of his theory he claims to have found minute crystals in the drops from a stalactite, but he regrets that he has not searched for such crystals floating in the air. The first of his objections to the "classical" theory appears at first sight to be reasonable, although calculation might show that the rate of diffusion away from a dead end is sufficient to prevent much concentration of gas; moreover, it must not be forgotten that stalactites may be formed from calcium carbonate that has been dissolved in water without the help of carbon dioxide. His second objection seems not so sound, as it might well be argued that chalk formed by precipitation from solution would be at least in as fine a state of subdivision as particles picked up mechanically from the surrounding limestone. One wonders whether the calcite crystals found by the author under the microscope could not have been precipitated by the evolution of carbon dioxide following release of pressure. Nevertheless the theory is most interesting and deserves further investigation.

G.S.G.

POLLNAGOLLUM (CLARE) (*Proceedings of Royal Irish Academy L.B.5, 1944, Williams and Norgate, 28 pp., plans, 2s. 6d.*). Messrs. Coleman and Dunnington in 1942-3 by many expeditions have with incredible patience made a survey of the whole system and added greatly to the known length of the watercourse above the pot-hole. They did not reach the river beyond "Baker's farthest" pool and do not accept Gowing's 1936 account apparently (*Y.R.C.J. No. 22*); as I came up the stream to the pool, I do.

The Austrian claim of five miles for the lower part is discredited; total length now known 3¾ miles. Both Oedl (1925) and Dunnington

(1942) use the same magnetic declination, 25°, instead of 18° and 15°. There is in consequence some doubt as to the relation of the main watercourse to the surface features. Poulelva is in any case very close to "Baker's farthest,"

It seems incredible that there are no faults in the Burren region.

KINDRED CLUB JOURNALS.—It is impossible to do more in this issue than acknowledge gratefully the journals of other Clubs, the *Alpine Journal*, *Himalayan Journal*, and those of Mountain Club of S. Africa, Tararua Tramping Club (N.Z.), Scottish Mountaineering Club, Cairngorm Club, Climbers' Club, Rucksack Club, Fell and Rock Club, British Ski Club, Pinnacle Club, Wayfarers' Club, and Oxford, Cambridge, Leeds University Climbing Clubs.

CLUB MEETS

1938.—A fearful gale at the end of January was followed by a calm sunny Sunday at Chapel-le-Dale. Eight men had an interesting walk over the tunnel into Dentdale, and two went down to Hackergill and followed it up to deep snowdrifts and over Wherside.

Eleven men met at Buckden in February, had a pleasant walk to beyond Beckermonds, where a cave was found and partly dug out at the first bend, then climbed to the Greenfield ridge and two followed it to Birks Tarn.

In March from the Robertson Lamb Hut, rain and sleet made climbing beyond the Middlefell Buttress too unpleasant.

Ten men met at Fort William at Easter, most of whom left the train at Spean Bridge on Friday morning and traversed the Aonachs and Carn Mor Dearg. Another party climbed Crowberry Ridge on their way through Glencoe. There was little snow on Ben Nevis, but much ice on the rocks. The Observatory, Castle, and Tower Ridges were climbed, but the Observatory Buttress beat off the attack.

April 30th, Newby Moss, was a tuition meet, and the pot-holes descended next day were rigged entirely by tyros under the eyes of veterans.

Camp at Austwick Beck Head came in the marvellously fine weather of early May. Six men took all the ladders into Juniper Gulf on the 8th, and found it absolutely dry, almost stuffy without the usual air current. At 9 p.m. on the 14th May, H. and F. Stembridge, Sidney Thompson and the Editor took in the life line, tied up the ladder on the big pitch and reached bottom at 144 ft. The big ledge reached in blinding spray on the rush attack in 1924 is only 12 ft. higher. Davidson, Marshall, Hilton, Nelstrop and Solari (R. C.) entered after midnight, passed the others on the third pitch, went right down, raised both sets of ladders to the top of the third, and so to bed. Reinforced by four less experienced men, the tackle was all cleared by 3.30 p.m. on Sunday.

Gaping Gill at Whitsuntide was most enjoyable in spite of rainy nights. Fred Booth and Nelstrop did Hensler's Crawl, Nelstrop and Matheson forced the flat bedding plane near the Flood Exit Pot for

150 yards, and Rigg, Godley, Wardle and the Editor made the second descent of Boulder Chamber Pot after a search of over an hour the day before had been needed to rediscover the entrance. Godley and Wardle drove home to Worksop the same night! Only six of the 19 attending were left on Tuesday to carry out the arduous job of clearing up.

At the Horton Meet late in June ten members of the Rucksack and Wayfarers' Clubs were taken to the bottom of Alum Pot.

At Coniston in July a second tuition outing was made to show the less experienced members the use of the rope and the technique of rock climbing.

In September there were Meets in Langdale with climbing on Gimmer and Dow Craggs, and at Burnthwaite. The Wasdale crags were in mist but the walks over Esk Hause were actually in good weather.

The first October Meet at Coniston struck a fierce gale. One party struggled over the tops, another visited the enormous cavern in the slate quarries. The second was at Wass, where in delightful weather eleven men did a long round to Ashberry, Boltby Bank, and along the Hambleton scarp.

In December at Bainbridge, though troubled by fog there were walks to Wether Fell, and to the Stake past Coaley Hole.

1939.—A big muster was seen at the Hill Inn in January. Complicated manoeuvres with rope ladders went on in the barn after dinner. There was much soft snow in the west above 800 ft. and some found ski-ing on Penygent.

A furious gale raged at Arncliffe in February, and though Littondale was glorious on Saturday, the parties to Penygent and in search of caves had a hard wet time on Sunday.

Only five showed up at Horton a fortnight later, but Chubb brought out a party on Sunday, and through fierce hailstorms thirteen men swept Fountains Fell for pot-holes with slight success.

In March the drive to the Robertson Lamb Hut was through very heavy rain, but a fine, calm day followed, and there was good climbing and some snow work.

At Easter eight men walked from Aviemore over the Larig Ghru, and after a delightful day at Inverey, back over Ben Macdui. Weather fine and warm, but the clouds lay low and nothing was seen, a great disappointment.

Later in April from the Hill Inn there were enjoyable tuition descents of Sell Gill by ten men and of Cowskull Pot and Long Churn by six.

No greater contrast could be imagined than the miserable conditions of the May camp at Austwick Beck Head, and the summer weather of 1938. The weekend before, Nick Pot was partly rigged, and four of the men after reaching home were called on for the dramatic night drive to rescue at Rowten Pot. The 14th May was so cheerless there seemed no fun about the expedition, and only Nelstrop and Hilton descended the 180 ft. pitch inside Nick Pot.

At Whitsuntide the President led a party of twelve to Fermanagh,

where Mr. Barbour of Killesher was most hospitable, allowing the use of part of his large house. The boat expedition into Pollnagollum is described elsewhere. Weather incredibly and impossibly fine.

A large party including Rucksackers and Wayfarers met at Braida Garth in June, visited the upper part of Rowten and its watercourses, and made many descents of Jingle Pot. A very enjoyable day.

As in 1938 we were fortunate in July to have fine intervals for the walks to and from Burnthwaite, but the main party had to climb the Pulpit Rock through two severe storms.

Some twenty-five men met the President on 2nd December for supper at Scott's Arms, Sicklinghall. A few walked, most came by car.

1940.—Nearly thirty were at the Hill Inn in February, ten crossing Ingleborough in calm and pleasant weather on the 24th. A rapid thaw had almost cleared from the fells the great snowfall of the first of three terrible winters. In July a dozen men met the President at Little Almscliff.

1941.—Again at Chapel-le-Dale, 1st-2nd March, thaw had reduced the deep snow of a worse winter to patches, spread over fell and dale alike. Twenty-four were at the dinner to Mr. and Mrs. Kilburn on this the last occasion they welcomed us at the Hill Inn, where two generations of Kilburns have been our hosts. An easy chair was our parting gift.

In the spring they moved to Fell Yeat, High Casterton, and there a delightful camp was held 21st-22nd June in a long spell of perfect days.

On 1st November there were nearly thirty at supper at Sicklinghall, Godley and Elliott coming from Retford. Mr. Cowling of Ilkley gave us an interesting talk on the prehistoric route through the Aire Gap in the Pennines.

1942.—Twelve met at the Hill Inn on 28th February, the week-end when the lowlands were clear before the last and heaviest snowfall of the worst winter in living memory. The Ribblesdale road was cut through drift for two miles. Five came from Horton over Ingleborough, six crossed Whernside, and Shaw walked from and to Hawes.

There could be no Jubilee Dinner, so to mark the completion of our club's fifty years existence the Meet at the New Inn, Clapham included wives of members. Seventeen men and eight ladies were at dinner 14th November, and our thanks are due to Mr. and Mrs. Williamson for the remarkable way in which, without permanent staff, they contrived to make us welcome for the week-end. The weather was favourable; six men went as far as Gearstones and returned over the pass by moonlight.

1943.—Twelve were at Chapel-le-Dale in February, weather chiefly misty drizzle. Some walked to Snaizholme, others down the gills to Ingleton and back by Easegill.

Another meet there in November struck a strong gale and a snowstorm on the 13th, but four forced their way over Blea Fell and Whernside on Sunday in otherwise fine weather.

1944.—The only other snowstorm of a mild winter coincided with

our next visit to the Hill Inn, 4th March. Some came over the Mere Gill pass, others by the grass road and Wold Fell from Garsdale. Twelve men were all at the same time on the top of snow-covered Whernside. In October, however, the weather was fine and sunny, and rounds were made of the many caves.

1945.—Again two Meets at the Hill Inn; fine and calm in February on Ingleborough and the furthest expedition to the Cowgill Y.H.A. For the 4th or 5th time in succession, Marshall with others crossed the Mere Gill pass to Clapham mostly in the dark. The row of cars in a fine and warm September told of some return to normal. On Sunday twenty men marched to view the Gritstone Club Hut and then went down Ling Gill.

1946.—There were sixteen at Buckden, February 9th-10th in delightful weather. Almost all traversed the Pike and Middle Fell.

Nine met at Fort William at Easter. Scurr and Mhaim and the Nevis Gorge were rushed on Friday with the aid of Catlow's car and there was climbing three days on the Ben.

Gaping Gill, August 2nd-6th. Owing to the exertions of Fred Booth, Armstrong and Eddison the tackle was overhauled and refitted. The head-gear was erected and the dam made with assistance the week-end before Bank Holiday. We suffered from rain and cloud night and morning, but the days were pleasant. Everyone had to bring his own food. Sixteen were in camp; Chubb and others came for the day, but passers-by were very, very few. South Passage was done thoroughly on Sunday, but though a crowd who knew little of the cavern was put in first, they stumbled upon nothing new. Conditions prevented a real examination of the new entrance through Disappointment Pot.

CLUB PROCEEDINGS

1938.—The Week-end Meets were:—30th January, Hill Inn, Chapel-le-Dale; 20th February, Buckden; 20th March, R. L. Hut, Langdale; Easter, Fort William; 30th April, Hill Inn; 15th May, Austwick Beck Head; Whitsun, Gaping Gill; 25th June, Horton; 16th July, Coniston; September, Langdale; 24th September, Burnthwaite; 9th October, Coniston; 22nd October, Wass; December, Bainbridge.

We regret to record the deaths of Edouard Martel, Charles Scriven and George Yeld (Hon. Members) and of T. S. Booth, ex-President.

At the Annual General Meeting, held 19th November, 1938, the following were elected to hold office, 1938-9:—

President, CLIFFORD CHUBB; Vice-Presidents, A. HUMPHREYS and H. ARMSTRONG; Hon. Treasurer, B. A. BATES; Hon. Secretaries, D. BURROW and F. S. BOOTH; Hon. Librarian, R. RIMMER; Hon. Editor, E. E. ROBERTS; Committee, C. E. BURROW, G. EDDISON, G. S. GOWING, B. NELSTROP, F. W. STEBRIDGE, G. C. MARSHALL.

The thirty-second Annual Dinner took place at the Hotel Metropole, Leeds on 19th November, 1938. The retiring President, J. M. Davidson, was in the chair and the principal guest was F. S. Smythe then entering

his twentieth year of membership. The kindred Clubs were represented by Sir W. Ellis, Alpine Club; Mr. P. J. H. Unna, Scottish Mountaineering Club; Mr. H. Spilsbury, Wayfarers' Club; Mr. F. T. Bancroft, Northern C. and F. Club; Mr. Makington, Rucksack Club; Mr. Powell, Climbers' Club; Mr. Dawson, Gritstone Club; Mr. T. Mitchell, Craven Pot-hole Club.

1939.—The Week-end Meets were:—29th January, Hill Inn; 12th February, Arncliffe; 26th February, Horton; 12th March, Langdale; Easter, Dell Hotel, Aviemore; 23rd April, Hill Inn; 14th May, Austwick Beck Head; Whitsun, Enniskillen; 25th June, Braida Garth; 23rd July, Burnthwaite; 2nd December, supper at Sickling-hall.

We regret to record the deaths of Robert Rimmer, J. W. Puttrell, and Sir Alfred Hopkinson (Hon. Member).

A Caving Rescue call was received very late on 7th May. Ten men drove from Leeds and Billingham, reached Kingsdale at 1.30 a.m., and brought out the body from Rowten Pot by six.

During the War no Annual General Meeting could be held. By a postal vote, members agreed that the same Officers and Committee should go on. The Committee appointed H. BOOTH Acting Librarian, on the death of R. Rimmer, and in 1941 H. L. STEMBRIDGE to the Committee while F. W. Stembridge was in the Forces.

1940.—Week-end Meet, 25th February, Chapel-le-Dale. 21st July, Meet at Little Almscliff.

1941.—Week-end Meets: 2nd March, Hill Inn; 22nd June, High Casterton; for supper 1st November, Sicklinghall.

We regret to record the deaths in these years of J. M. S. Lister and Alex. Campbell.

1942.—The Week-end Meets were:—1st March, Hill Inn; 15th November, New Inn, Clapham.

A grievous list of losses has to be recorded, J. F. Wardle killed on active service, G. T. Lowe and H. H. Bellhouse (Founders and ex-Presidents), J. Norman Collie (Hon. Member), W. H. Albrecht, C. R. Barran, F. B. Cooper, and J. Hepworth.

Fifty years of the Club's life were completed on October 6th, 1942, and as far as possible celebrated at the Clapham Meet. On the 26th December, the anniversary of the first Outdoor Meet, two members and others reached Blubberhouses Hopper Lane Hotel.

1943.—Week-end Meets were:—21st February, Hill Inn; 13th November, Hill Inn; Catlow entertained a small party on Easter Saturday at Wood Hall.

We regret to record the deaths of W. E. Evans, killed on active service, Canon A. D. Tupper-Carey (Hon. Member), and Cuthbert Hastings.

1944.—Week-end Meets were:—5th March and 15th October, Hill Inn.

We regret to record the deaths of Walter Parsons (ex-President) and R. E. Sargent.

1945.—Week-end Meets were:—4th February and 30th September, Hill Inn.

We record with deep regret the deaths of Edward Calvert, J. J. Brigg, and Sidney Thompson.

1946.—Week-end Meets were:—10th February, Buckden; Easter, Fort William; August 4th, Gaping Gill.

We record with deep regret the deaths of E. Creighton, Blackburn Holden, and H. Brodrick.

Club Headquarters in Park Square had to be given up in 1941, but owing to the efforts of H. Armstrong, an excellent room has been taken in the Salem Institute, just south of Leeds Bridge.

The Club Library has been greatly enlarged by generous gifts from Gray and from the Wayfarers' Club through the efforts of Davidson.

At the Annual General Meeting, held 16th November, 1946, the following were elected to hold office 1946-7:—

President, H. ARMSTRONG; Vice-Presidents, D. BURROW and A. L. MIDDLETON; Hon. Treasurer, B. A. BATES; Hon. Secretaries, F. S. BOOTH and F. W. STEMBRIDGE; Hon. Librarian, H. S. BOOTH; Hon. Editor, E. E. ROBERTS; Committee, G. S. GOWING, G. C. MARSHALL, B. NELSTROP, H. L. STEMBRIDGE, R. E. CHADWICK, R. G. TITLEY.

The thirty-third Annual Dinner (Jubilee Dinner) took place at the Hotel Metropole, Leeds, 16th November, 1946. The retiring President, Clifford Chubb, was in the chair and the principal guest was Mr. W. A. Poucher. Kindred Clubs were represented by Mr. R. B. Graham, Alpine Club; Mr. W. G. Murray, Scottish Mountaineering Club; Mr. H. Spilsbury, Rucksack Club; Mr. C. D. Milner, Wayfarers' Club; Mr. G. E. Griffiths, Gritstone Club.

Harold Brodrick left a legacy to the Club of £50, several important books, and many maps.

NEW MEMBERS.

1938.

WHITE, JOHN CROSBY, British Post-Graduate School, Hammersmith Hospital, W.12.

WILLIAMS, GEORGE CLARKE, 34, St. George's Terrace, Jesmond, Newcastle.

WARDLE, JOHN FREDERICK, Everton Vicarage, Doncaster.

SHERWOOD, JAMES BARLOW BROOKS, 108, Lacey Green, Wilmslow.

1939.

FARRER, SYDNEY JAMES, Newby Cote, Clapham, Yorks. (Hon. Member).

STRINGER, HORACE SUTCLIFFE, Daify Nook, Carleton, Pontefract.

TITLEY, RICHARD GERALD, 6, Pinetree Avenue, Boston Spa.

CHADWICK, ROBERT EVERARD, 14, Butts Court, Albion Street, Leeds, 1.

CULLINGWORTH, JOHN EDWIN, 1, Belgrave Terrace, Huddersfield.

1940.

WATTS, HAROLD R., Archbishop Holgate's Grammar School, York.

BOWLING, MICHAEL HARROP, 30, Sandhill Avenue, Moortown, Leeds.

1941.

SPENCELEY, GEORGE BROWNING, 94, Station Parade, Harrogate.

1942.

FALKINGHAM, ARTHUR F., 6, Park View Terrace, Bradford.

THOMPSON, HARRY, Green Mire Cottage, Chapel Stile, Ambleside.

1943.

EDWARDS, WALTER MANDEL, 5, Oak Bank, Shaw Lane, Leeds, 6.

1945.

ADDYMAN, JAMES CADWALLADER, White House, Starbeck, Harrogate.

MIDDLETON, DAVID, The Terrace, Boston Spa.

1946.

BLAIR, DAVID STEPHENSON, 19, Hereford Road, Harrogate.

HURRELL, PETER MICHAEL, Boxtrees, Clifford, Wetherby.

ADAMS, ARTHUR, c/o W. C. Holmes & Co., Huddersfield.

MIDDLETON, RALPH, 22, The Fairway, Alwoodley Lane, Leeds.

PETRIE, PAUL DOUGLAS, Mount Stead, Ben Rhydding.

STOREY, WILLIAM, 174, Taylor Hill Road, Huddersfield.

JOLY, ROBERT DE, Uchaud, Gard, France (Hon. Member).

BACK NUMBERS.—These can be obtained from H. Booth, 42, York Place, Leeds, 1. Prices.—Nos. 4, 5, 17, sold out; Nos. 2, 3 and 18, 10s. each; Nos. 1, 14, 15, 16 and 23, 5s. each; Nos. 6, 7, 10, 11, 12, 19, 20, 21 and 22, 4s. each; Nos. 8 and 9, 2s. each; No. 13, 3s. each. Specially designed green buckram cases, 2s. each. Postage extra.

President—H. ARMSTRONG, Geecroft House, Sicklinghall, Wetherby.

Secretaries—F. S. BOOTH, 42, York Place, Leeds, 1.

F. W. STEMBRIDGE, Sawdrie Close, Huby, Leeds.