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CORRESPONDENCE.

Everest : the Final Problem.

To the Editor of the ALPINE JOURNAL.

SIR,—In estimating the difficulties and analysing the problems inherent in the unclimbed portion of Everest, it is necessary to consider not only the manner in which this last 1000 ft. may be climbed but the problems involved by what may best be described as a foundation of attack without which the final attempt must fail.

The 1933 expedition were in the unhappy position of not knowing the best line of approach to the summit, the result being a division of opinion in a dissipation of climbing and mental energy between the N.E. ridge route and Brigadier Norton's traverse approach. The consensus of opinion now is that the latter route is one affording a strong chance of success and that it would be a waste of time and energy to endeavour to climb the 'Second Step,' or even of attempting to reach the foot of this formidable obstacle. Everest will only be climbed by a man who is single-minded in the matter of route, and any doubt or hesitancy in this respect must always lead to defeat.

Assuming, therefore, that the energies of the next expedition will be concentrated on climbing the final pyramid by means of Norton's route and the subsidiary couloir leading through the rock band above, it remains to be discussed how the party may best attack it.

Leaving aside vital questions such as the establishment of Camp IV on the North Col, and the economies in climbing strength which all are agreed must be made on the slopes of the North Col, the most important problem leading up to the final assault is one of camps. In 1933 Camp V was at 25,700 ft. and Camp VI at 27,400 ft., and attacks on the summit were launched from Camp IV, 23,000 ft. (the first attacks from 22,800 ft.). Do these camps both in position and number form a sound foundation of attack? Is Camp IV a sufficiently high advanced base from which attacks may be launched? The experiences of 1933 suggest 'no' to both these questions.

It was hoped, in 1933, to establish Camp VI somewhere in the neighbourhood of the base of the 'First Step.' As events proved, this was not possible. The party was delayed in starting from Camp V by wind and this, combined with fatigue, resulted in the camp being placed at 27,400 ft. instead of at 27,800 ft. as had been hoped. Even so it was a tremendous carry on the part of the porters and it is very doubtful, even taking into account the increase that seems to take place in their powers with each successive expedition, whether much more could be expected of them next time. Furthermore, we have the evidence that Wyn Harris and Wager, after only one night at Camp VI, went more slowly next day than did Shipton and I after two nights at this camp.¹ This suggests that they were tired after the effort of ascending from 25,700 ft. to 27,400 ft. in one day, which is borne out by the experience of Shipton and myself who welcomed a day of rest, enforced by bad weather, after our ascent from Camp V. In my own case I know that I was able to go much better after two nights at Camp VI than I would have done had we had to make the attempt the day after arriving there. This experience would appear to show that, contrary to the belief of some, recuperation of physical energy is possible at a height exceeding 27,000 ft., and I would go even farther and say that for a period of two or three days at least acclimatization more than counterbalances deterioration at this altitude. In other words rush tactics from an altitude viewpoint are a fatal mistake on Everest and the weather and the fitness of the party alone must determine the speed of attack.

That a climber is in a better physical condition to assault the summit after two nights at Camp VI suggests that, apart from fatigue, he may have got ahead of his acclimatization level in the first place and this I am convinced must always be the case when only three camps are established above the North Col and the climber advances from camp to camp without more than one night at each camp.

The alternative is to pitch an additional camp, thereby making the ascent one of four days from the North Col, but to this there are two main objections. Four days of fine weather is a lot to ask of Everest; and the additional portage involved is considerable. Can a compromise be effected? The fact that members of the assault parties in 1933 were able to spend at one time or another several nights at Camp V in the worst possible conditions, due primarily to the weather and inefficient tents which let into them the driven snow, and were yet fit enough to make attempts on the summit, suggests that deterioration was not serious and that it was more than counterbalanced by acclimatization. It would appear certain that deterioration does take place as the result of oxygen lack, but in 1933 it was hastened by the climbing party having to work very hard in establishing the North Col, work that should be

¹ This is taking into account the time spent in reconnoitring.

accomplished next time by a special advance party (in 1933 no such party was available), inefficient tents (all are agreed that an improved fabric and an improved opening—possibly the Arctic sleeve opening—are essential next time) and food which was not available in sufficient variety above Camp III. As regards this last, Shipton and I both suffered from weakness in the legs during our first ascents from Camp IV to Camp V, which disappeared directly more appetizing food had been sent up to Camp IV. Indeed, the change in our physical condition after a day of 'stuffing' at the things we *liked* was remarkable. I believe that quite 50 per cent. of the deterioration in 1933 was due to the above-mentioned causes and not oxygen lack, and that the climbing parties of a future expedition or expeditions will acclimatize to an extent which many still believe to be impossible, provided that they are spared as much preliminary work as possible and that the standard of bodily and gastronomical comfort is greater than hitherto.

Taking such evidence into consideration, it would appear certain that a higher base of attack is indicated. The 1933 Camp V was horribly uncomfortable on account of its exposed position on the N. ridge. Next time it might be placed in the neighbourhood of 24,500 ft. on or near the top of the snow ridge leading up from the North Col. There would appear room for a camp on the ridge itself, but there seems a probability that there is a less exposed position available near the foot of the rocks above the ridge. Up to this point it should be possible to carry strong, warm tents and sufficient food and equipment to establish a comfortable base of attack from which the assault parties are launched. The situation of Camp VI then suggests itself as about 26,500 ft., but it is somewhat doubtful as to whether there is a camping site available, in which case it may be made at 26,800 ft. on the 1924 site, an exposed position, or 200 ft. higher on the rocks and screes below the base of the 'yellow band' where there are numerous camping sites. This last would mean a carry of 2500 ft., a long one, but taking altitude and the nature of the ground into account, no more trying than the 1933 carry, from Camp V to Camp VI. I believe, however, from what I remember of the ground that a camping site may be found at about 26,500 ft. Camp VII would then be placed on a scree ledge near the base of the 'first step' at about 27,800 ft., which means a carry of 1300 ft. from VI as opposed to the 1933 carry of 1700 ft., from 25,700 ft. to 27,400 ft.

This scheme might be further improved if, during the consolidation of the advanced base at 24,500 ft., it was possible to place an intermediate camp on the 1933 Camp V site at 25,700 ft., which could be occupied by a supporting party and which might be valuable in assisting descending, exhausted climbers. This site might well be of value as a dumping-place in the event of doubtful weather making an ascent to Camp VI inadvisable and, in the event of sufficient portage being available, it might be established almost as soon as Camp V is established.

Another important point, and one on which all members of the 1933 expedition are agreed upon, is having the upper camps large enough to accommodate four climbers to prevent any overlapping in personnel and the descent of a party, hung up by bad weather, due to the advent of the next 'wave' of attack without having attempted the summit.

Turning now to the route itself from Camp VII to the summit, the unfortunate necessity arises of having to commence the final ascent by a *descent* of about 100 ft. This is necessitated by the impossibility of placing the camp in a more convenient position and of having to traverse the 'yellow band' to the foot of the subsidiary couloir where it bifurcates from the main couloir as low as possible. The writer returned by this route and discovered much easier going than on the route of ascent, which was made along the top of the 'yellow band.' Given dry rocks the traverse to the foot of the subsidiary couloir from Camp VII should take less than an hour, this point being about 27,800 ft. The ascent of this subsidiary couloir on to the face of the final pyramid is one of about 400 ft. and would appear to constitute the crux of the climb. It is possible that the couloir can be entered higher up as was attempted in 1933, but to do this involves more difficult climbing and a longer traverse in which a rope is useless. By the lower route the climbing is easy to the foot of the couloir and thenceforward, owing to the direct nature of the route, the rope can be used to advantage. The importance of the party securing themselves by every means in their power during the descent of this 400 ft. cannot be overestimated, for not only is the route technically difficult, but it is one where a slip by a tired man is all too probable. The party should carry with them, apart from any rope they may require for climbing purposes, at least 400 ft. of the lightest line consistent with the necessary strength² and some pitons. They could wear leather belts and thread this line through these during the descent. The line and pitons would be dumped at the top of the couloir to await their return. It is not likely that the couloir itself would be ascended as the snow would almost certainly be soft and powdery, but the rocks by the side of it would have to be utilized. There is a further possibility that a better route could be made from the junction of this couloir with the main couloir straight up the rock face to the west of it, but this would depend on conditions: it would also be more or less a direct route and the line would be equally essential. Wyn Harris has suggested the possibility of employing a light oxygen apparatus to give the climber the necessary physical and mental stimulus for this 400 ft. and this is a problem well worth considering. It would have to be a very light apparatus, and it would have to be carried from Camp VII to the foot of the subsidiary couloir without being used, which should be possible as the climbing, as already mentioned,

² A breaking strain of about 3 cwt. would be sufficient.

is not difficult. This could be abandoned at the top of the couloir and any oxygen left employed for the descent.

Once on the face of the final pyramid, at about 28,300 ft., there should be no further difficulty until the abrupt little wall leading up to the summit ridge is reached, although the going will probably be found steep and fatiguing by reason of the broken nature of the mountain-side hereabouts ; I have a distinct memory of huge boulders littering this face. Brigadier Norton has suggested as the best route one which bears westwards across the face of the pyramid to the N.W. ridge up which the ascent is completed and this certainly appears the most likely route. If the summit ridge, which must be some 200 yards in length, is gained at its eastern extremity there is the possibility that corniches may be encountered, although the ridge judged by Alpine standards appears easy enough. At all events a piton and a length of spare line should be taken if possible to the summit in order that any difficulty other than the descent of the subsidiary couloir may be countered on the descent.

As regards the time the ascent will take from Camp VII assuming that not more than an hour is occupied in reaching the foot of the subsidiary couloir and that the party leaves Camp VII at 5 A.M.—six hours from the foot of the subsidiary couloir would allow of an average uphill speed of slightly over 200 ft. an hour, assuming the summit to be 29,141 ft. and not 29,002 ft.—a safer assumption to make ! This means that the summit is reached by midday. The maximum safe limit is probably about 2 P.M., as it is very doubtful if descent will be made at a speed greater than half as much again as the speed of ascent taking into account fatigue and the technical difficulties to be overcome. The *ascent* from the 'yellow band' traverse to Camp VII will take some doing, and it is unlikely that a party will have the strength left to descend directly to Camp VI.³ If an electric beacon could be left at Camp VII this would be a moral and practical advantage in the event of the party returning so late that they are benighted on the route. Also they might be equipped with electric broach lamps which weigh only 4 or 5 ounces and give light for several hours. A support party at Camp VII might render valuable aid to a returning party, although at that height they would be limited in the physical help they could give. Still they could prepare hot drinks, etc., and help the party down next day.

It may well be argued that the foregoing is a counsel of perfection, but what else can Everest plans be ? At all costs the mental worries of divided opinions as to camp sites and routes must be avoided and each movement in the game must be a single-minded one in intention whatever the weather may have to say.

I am, etc.,

F. S. SMYTHE.

9 Brunner Close, N.W. 11.

June 27, 1934.

³ Unless this is pitched just below the 'yellow band.'

The Ice Axe found on Everest.

SIR,—So many questions have been put to me by climbers and others regarding the axe found by Messrs. Harris and Wager on Everest last year that the following notes may not be unwarranted.

On being shown the axe by Wyn Harris, what struck me at once was its entirely undamaged condition. It cannot, therefore, have fallen far, if at all. I noticed also that the shaft had a triple nick \equiv cut and inked in upon it, and understood that this had not been seen before by Harris or Wager. It seemed to suggest an old mark that had been used by Irvine on some of his equipment, but this has not been confirmed by examination of such items as were returned to Irvine's family, although some members of the latter also seemed to recollect having seen a similar marking. Mrs. George Mallory, moreover, tells me that as far as she is aware her husband never marked his things with such a triple mark, or with any other mark, and she thinks it very probable that the axe was Irvine's. Wyn Harris considers, however, that this mark may have been cut on the axe by one of the 1924 porters for identification of his sahib's property, a practice that appears to have been prevalent on the 1933 Expedition. Indeed I am assured by Harris that the very fresh \times cut lower down on the axe in question was placed there during the return journey by his own servant Pugla, 'who had an unfortunate habit of marking everything he looked after.' Such, however, was not the habit of many, if any, of our porters in 1924.

These marks, therefore, are not of any assistance at present in identifying the actual owner (whether Mallory or Irvine) of the axe. Some members of the 1933 Expedition had considered the axe to be Mallory's owing to the Swiss maker's, Willisch of Taesch, stamp engraved upon it, on the grounds that Mallory had visited the Alps a short time prior to the Expedition of 1924. They seemed to be unaware that light axes by this maker had been supplied to *all* members of the 1924 party (as they were also incidentally in 1933), and that either Mallory or Irvine might have had one of these expeditionary property axes in use on their last climb.

The actual position where the axe was found was on a gently inclined slab about 200 yards east of the First Step and about 60 ft. below the crest of the N.E. arête. The question then arises as to what deductions can be made from that position as to Mallory and Irvine's movements, and the highest altitude which they may have attained, in view of my claim to have seen them on June 8, on *either* the First *or* the Second Step.

In spite of the suggestions of some that I was deluded into believing that clouds racing over rocks were human movements, and the possibly facetious, possibly serious, opinion of Dr. Longstaff that I must merely have seen Alpine choughs flying across the face of the mountain, I am still prepared to maintain that I saw two *human* figures moving deliberately and expeditiously (not 'swiftly,' as

some have misquoted me) in the way that I described in 'The Fight for Everest.' Those clearly human figures could have been, of course, none other than Mallory and Irvine, and they were moving up a small snow-slope to the foot of one of the rock-towers on the N.E. arête. Owing to the foreshortening of the view, however, which incidentally for a short time was quite clear of cloud, I could not be certain whether it were the First or the Second Step; nor was I completely confident that I saw one figure or not, appear later at the top of the particular rock feature as the mist once more obscured my view. In this appearance it was not, as suggested by some, an instance of 'the wish being father to the thought,' for unlike the case of Smythe and Shipton last year, who were deceived into believing they could see Harris and Wager returning from their climb, I had no expectation of sighting Mallory and Irvine, engrossed as I was in my geological observations: my surprise was great at seeing them still ascending, and at no higher point at that advanced hour.

I consider it is unlikely that the position of the axe marks the scene of an accident, at any rate on the ascent. It was above this place that I feel sure I saw Mallory and Irvine. Where the axe was found the rocks are very easy, of gentle inclination, and the position of course much too far horizontally from the First or the Second Step for the axe to have fallen from either of these features, a suggestion which has been put forward by some. Moreover the comparatively easy ground here inclines one to believe that in all probability the party was not roped unless it were on the descent in the dark (see below): Harris and Wager found no necessity to rope on this part of the mountain. Consequently it should not be forgotten that if this were the case during Mallory and Irvine's ascent, and one only had slipped, the other would undoubtedly have returned to tell the tale.

It seems to me very possible that one of them—and more plausibly Irvine, who was less used to carrying an axe on a rock-climb than Mallory—may have decided to leave his axe on the ridge during the ascent, to be picked up on the descent, in view of the climbing being almost entirely on rock under the conditions prevailing at that time: one axe would be retained by the party in case of eventualities, a practice by no means uncommon on Alpine rock-peaks.¹

In view of the difficulties of the Second Step, reported on by last year's party, it is in my opinion quite likely that they may have tried to 'turn' it, *i.e.* traverse round it on the eastern face of the mountain, seeing that its northern side is said to be so impregnable. A slip occurring in so doing would mean a fall towards the Kangshung Glacier, and accordingly no possible traces of their fate. This of course assumes that it was at the First Step, and not the Second Step, that I would have previously seen them, a possibility I expressed in 'The Fight for Everest.'

Alternatively, I am prepared to believe that under the prevailing

¹ For a far more likely explanation, see p. 419.—*Editor.*

good conditions by one means or another they may have overcome the difficulties of the Second Step, and actually have reached the summit, or some other high point on the final pyramid, should time have denied them the summit. The axe, if retained for the ascent, might then have been dropped *accidentally*, at the spot where found, in the course of their descent in the dark. In this case what their eventual fate may have been it is impossible to say. But it is likely that they would have been roped if it were dark. And if it be maintained that they fell from the position where the axe was found, a view that is held by some members of last year's party and others, it is rather surprising that Smythe or Shipton did not find some signs of the disaster lower down: they passed immediately below the position on their ascent and descent, and having heard from Wager and Harris of their discovery, they must have been on the look-out for further evidence. The plate opposite p. 6, accompanying Rutledge's paper, *Geogr. Journ.* LXXXIII, 1, 1934, shows well the disposition of things and the routes taken by different parties. It has been stated that after 9 years no traces of an accident would remain, clothes, sacks, etc., being blown away; and that the bodies may have fallen down to the bergschrund of the Rongbuk Glacier. But it is very questionable whether the irregularities and general inclination of the mountain face would have allowed of the bodies or their equipment falling or even rolling so far; nor should it be forgotten that Camp VI of 1924 was found by Longland last year to be still in existence, just as Finch's camp of 1922, in a very exposed position, was found by us in 1924, though with the tent-material shredded by the wind.

One speculation is perhaps as good as another, particularly on such scanty evidence, but all things considered I find myself quite unable to conclude that the place where the axe was retrieved was the scene of an accident in the course of Mallory and Irvine's *ascent*: if it marks a disaster on their descent, or alternatively were *placed* there on the ascent or the descent, the case would more nearly fit the circumstances of my observations on June 8, 1924, and would still allow of the possibility I originally put forward that they may have reached the summit.

I am, etc.,

N. E. ODELL.

Clare College, Cambridge.

August 8, 1934.

N.B.—In case another expedition to Everest is impossible for some years, it should perhaps be emphasized that Wyn Harris left his own axe to mark the spot where he found the now historic one: the latter now resides on the wall of the reading room at the Club.

The Health of the Everest Expeditions.

DEAR SIR,—On page 109 of the last issue of the JOURNAL, Mr. C. G. Crawford in his criticism of 'Lessons from the Mount Everest

Expedition of 1933' refers to 'the various throat and chest affections which have harassed previous expeditions.' To this there is a footnote questioning the application of these words to the 1922 Expedition.

First of all, I wish to confirm most emphatically Mr. Crawford's statement as regards the 1922 Expedition.

Looking through my notes made at the time I find that on the journey across Tibet towards Mount Everest, almost daily, and sometimes twice a day, I either took sick parade myself, or helped Longstaff or Somervell to do so. On several occasions I remarked on the unexpectedly high sick rate among the natives, and on one or two occasions I made the same remark concerning the whites. A large proportion of the cases was due to sepsis of different kinds. I remember very clearly how almost every cut and abrasion became septic until about the time that we reached the Base Camp. So marked was this that it was discussed by non-medical members of the Expedition, and one theory which seemed to be commonly held attributed this sepsis to the lack of oxygen. This theory appeared to me to be somewhat fantastic, but at the time I could suggest no other, so said nothing. Later, however, it was absolutely disproved. For once above the Base Camp and away from the contaminated dust and the ungroomed transport animals, cuts again healed by first intention and abrasions quickly and without infection, and this with oxygen much scantier even than before. Moreover, crossing Tibet, inflammatory troubles of the various parts of the respiratory tract were very frequent—tonsillitis, pharyngitis, laryngitis, tracheitis, bronchitis, amongst both whites and natives, and amongst the latter there were a number of cases of broncho-pneumonia. Speaking from memory, for unfortunately I did not keep detailed notes in all cases, Geoffrey Bruce had a severe tonsillitis and pharyngitis, and I think that Somervell had the same, and a number of the other white members suffered from the same sort of trouble in a less acute form. So much was this the case that the condition came to be referred to commonly (but in my opinion wrongly) as 'high-altitude throat.'

There were also cases of conjunctivitis caused, in my opinion, by infected dust being blown into the eyes.

Furthermore there was a marked epidemic of gastro-enteritis, caused quite possibly by a similar wind-blown infection. Finch suffered from this very severely, and Longstaff also, if I remember rightly. I myself suffered from it for several weeks, but in a much less acute form. Others amongst us caught it in varying degrees of severity.

Now all these things sap the strength of a party very severely. 'Prevention is better than Cure,' and Crawford is very right in suggesting preventive measures. However, in my opinion, the respirator which he suggests is very unlikely to be either practicable or efficient. But an astringent antiseptic gargle (*e.g.* potassium

permanganate) would form a very efficient and simple safeguard against such conditions if used as a routine procedure two, or perhaps three, times a day, and especially after any more than usually dusty journey. This, combined with the strictest medical supervision of the cook-house to ensure the best possible sanitary conditions in this department, should minimize the risks of trouble from infection across Tibet to the Base Camp.

These matters of prevention, although of considerable importance, are nevertheless the sort of side-issues which might easily be overlooked by the next Expedition, perhaps years hence and lacking practical experience.

Yours faithfully,

A. W. WAKEFIELD.

Keswick,
Cumberland.

27th June, 1934.

The Disaster on Nanga Parbat.

[The following correspondence is published.]

Alpine Club,
23 Savile Row,
London, W. 1.
19th July, 1934.

YOUR EXCELLENCY,—The Alpine Club has heard with very great sorrow the news that possibly disaster has overtaken some of the Members of the German Expedition to Nanga Parbat in the Himalaya. I wish to convey to you and all German climbers, on behalf of the Alpine Club, our sincere hopes that the news will turn out to be incorrect and that no person will have suffered. We sincerely trust that all Members of the Expedition will return safe and sound.

I am,

Your Excellency's obedient servant,

(Signed) JOHN J. WITHERS,
President, Alpine Club.

HIS EXCELLENCY THE GERMAN AMBASSADOR,
9 Carlton House Terrace, S.W. 1.

Der Botschafter des Deutschen Reiches in London.

21st July, 1934.

DEAR SIR,—I am writing to thank you for your letter and the words of sympathy, kind thoughts and wishes expressed therein on behalf of the Alpine Club.

It has given me great satisfaction to see that British Climbers are sharing the anxiety and sorrow that have arisen in my country with

regard to the uncertainty of the fate of several members of the German Expedition to Nanga Parbat in the Himalaya.

Thanking you again, I am, Dear Sir,

Yours sincerely,

(Signed) HOESCH.

THE PRESIDENT,

The Alpine Club,

23 Savile Row, W. 1.

Alpine Club,

23 Savile Row,

London, W. 1.

24th July, 1934.

YOUR EXCELLENCY,—I am in receipt of your kind letter of the 21st instant.

Since writing my former letter, the news has reached England that three distinguished German climbers have been killed on Nanga Parbat, together with several porters.

The Alpine Club sends you as the representative of the German Nation, German climbers, and especially the relatives of those who have perished, their very deepest sorrow and sympathy at the terrible accident, which has now turned out to be true.

I am,

Your Excellency's obedient servant,

(Signed) JOHN J. WITHERS,

President, Alpine Club.

HIS EXCELLENCY THE GERMAN AMBASSADOR,

9 Carlton House Terrace, S.W. 1.

PROCEEDINGS OF THE ALPINE CLUB.

A GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, London, W. 1, on Tuesday, April 10, 1934, at 8.30 p.m., Sir John J. Withers, *President*, in the Chair.

Mr. Terris Moore was balloted for and elected a Member of the Club.

The PRESIDENT referred to the death of Mr. R. W. Brant, who was elected in 1891.

The Hon. Secretary and Treasurer, Mr. Sydney Spencer, presented the accounts for 1933, and these were adopted *nem. con.*

Professor T. GRAHAM BROWN proposed that a vote of thanks be accorded the auditors, Messrs. H. J. Macartney and H. J. Gait. This was duly seconded and carried with acclamation.

Mr. B. R. GOODFELLOW then read a Paper entitled 'Five Traverses in Dauphiné, 1933,' which was illustrated by lantern slides. Discussion followed in which Professor T. Graham Brown, Dr. Claude