

MOUNTAIN WARFARE

BY THE PRESIDENT.

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ALL land warfare is conditioned by the nature of the ground over which operations are conducted. By ground is meant not only physical configuration, but also surface features such as forest, jungle, desert, swamp, rock or snow, and communications. The weapons, transport and equipment employed, the tactics in action and the consequent strategical possibilities all depend on these factors. Troops whose training, equipment and transport have not been adapted to operations in a particular type of country are at a serious disadvantage if the area of operations, or even a part of it, consists of such country.

There is in this connection no more misleading word, psychologically, than the word 'normal' as applied to ground. There is no such thing as normal ground or normal warfare. To a certain extent in the case of continental countries the ground on each side of their frontiers may be regarded as normal. Normal warfare for the Swiss Army is mountain warfare. For us who may have to fight at any moment in the African desert, the Burma jungle, the Italian, Balkan or Afghan mountains or the plains of Flanders, none of these should be regarded as more normal than the other. The danger in the word is the tendency it creates to think of one kind of ground as habitually to be preferred to any other instead of thinking of all kinds of ground as equally offering opportunities to be utilised and special features to which training, equipment and organisation have to be adapted.

Closely connected with this is the equally misleading conception of a 'normal' division or other higher formation, carrying with it the idea of 'normal' numerical strength, armament and transport, and so creating a tendency to think of such weapons or means of transport as the natural part of a force, instead of beginning by asking what weapons and what transport are, taking it all round, the most efficient and economical in a given country, and then organising the formations to match the local conditions.

The Boers in the South African War were an excellent example of a tactical method and equipment suited to a country of wide spaces, sparse population and few communications. They relied on two instruments only, the rifle and the pony. At a very early stage of the war they jettisoned such artillery and machine-guns as they had, as a mere encumbrance, achieving little compared with the extra burden imposed on transport and interference with mobility both on the march and in action. When they re-armed themselves with captured British rifles they threw away the bayonets, relying on the rifle fired from the hips as a more effective close range weapon by day or night.

We fought most of the last war in flat or undulating country, densely populated and with a close network of roads and railways. This enabled vast masses of troops, as compared with the width of the front, to come into action on both sides. These offered obvious targets for weapons of relatively less precision, *i.e.*, not aimed at individual men but at zones and areas, such as machine-guns and artillery; and the abundance of communications afforded facilities for bringing up the vast masses of ammunition required for that purpose. The weight of fire, in its turn, drove each side below the surface of the ground. The deadlock of trench warfare was broken by the tank. More tanks, more armoured cars, more artillery and more mechanised transport represent the acme of this type of warfare, of which the German advance of 1940 was a supreme example.

The North African desert, comparatively level and traversable in every direction, afforded a field for a somewhat different, but still most effective use of every form of mechanised warfare.

On the other hand, in the snow-covered forests of Finland, Russian mechanised columns, confined to a few roads, were helpless against the Finns moving round them in every direction on ski and with pony-drawn sledges. Checked in front, attacked along their whole length on both flanks and cut at some point behind, they were paralysed and in some cases simply perished of cold and hunger.

A similar fate befell our own mechanised forces in Malaya faced with Japanese infiltrating through the jungle in small parties on foot, on bicycles, on commandeered canoes, and setting up road blocks at points best calculated to paralyse our road-bound troops and transport.

Snow and jungle are two particular instances of ground in which troops, trained and equipped by habit or special preparation, proved their superiority over the mechanised armament, transport and tactics evolved on the battlegrounds of Northern Europe. The point I would make is that mountainous country is at least as much a type of its own, requiring special tactics, special equipment, special training and affording its own special strategical opportunities. What is more it is one of the most frequent types. For obvious reasons mountain ranges also often mark the frontiers of nations and are consequently an unavoidable zone of warfare.

There are certain features common to all mountain country, though they are accentuated as well as affected by the permanent presence of snow and ice in the high Alpine ranges. The first and dominant feature is that all wheeled weapons and transport can only be used on roads which are few in number and invariably commanded from above. Even tracks fit for mule transport are limited and in a somewhat less degree subject to the same disability. No advance is possible unless preceded by troops who have climbed the heights on foot, and a large part and in the higher ranges the whole of their supplies and ammunition must be carried on their own backs or on those of porters.

Mountain warfare in the narrower tactical sense is therefore primarily concerned with operations conducted on foot and with the weapons and

supplies that can be carried on human or animal backs (or dropped by aeroplane). In a broader sense it will, of course, be largely concerned with thus securing, or denying to the enemy, the use of roads through mountain country for the purpose of enabling larger bodies of troops and equipment suited to a different kind of ground to pass through mountain country to cut the enemy's main communications or seize a vital centre or achieve strategical surprise. It may sometimes be an end in itself; more frequently it can serve as a valuable or even indispensable adjunct to the only available line of advance or defence; on occasion it can afford the opportunity for an entirely unexpected strategic development.

It is important to keep in mind the distinction between mountain warfare in itself and the passing of troops through mountain country as the result of success in mountain warfare, for ulterior strategic purposes, when we come to considering the armament and equipment required for mountain fighting. The difficulties of transport not only preclude all heavy weapons, but also all weapons which consume large quantities of ammunition. At the same time the forces engaged on both sides are few compared with the ground covered. Even more they rarely occupy a continuous front but are dispersed in accordance with the cover afforded by boulders, gullies, etc. Weapons that depend on plastering or spraying a line or zone, whether with high-explosive, shrapnel or bullets, are consequently of very little value when there are only two or three of the enemy to an acre of mountain side. Even pack artillery, mortars and machine-guns can only play a subordinate part to the tommy-gun and grenade in forest or scrub-covered mountains and above all to the rifle in all the higher ranges. The mountain fighter should be trained to regard each bullet as precious and not to be fired unless he is fairly certain of killing.

It is not merely a question of certain types of weapons being of less value in mountains than elsewhere, but of their being an encumbrance and obstacle to the free development of the most effective mountain warfare tactics. This applies to the psychology as well as to the logistics of mountain warfare. Mountain troops should be trained never to expect their attack to be prepared by artillery bombardment or to look over their shoulders for support from the guns; at any rate not in real mountains as distinct from merely hilly country. They should think of guns, tanks, etc., not as protectors but as passengers whose safety it is for them to ensure.

The actual equipment of mountain troops is a matter of technical detail which I need not go into here. The all important items are the boots, which should be strong, not too heavy and well nailed. Long and heavy overcoats are useless and should be replaced by extra pullovers and light, strong waterproof capes. The equipment will otherwise vary with the climate and other local conditions.

The possibilities and opportunities, tactical and strategic, of mountain warfare are enormously enhanced by the development of aviation. Air reconnaissance and tactical air support in action can play a very

important part. But even more important, perhaps, is the help that can be given by airborne supplies of food and munitions, and by airborne reinforcements in the shape of troops, artillery, light mechanised transport, etc., for mountain troops which have successfully fought their way across to more open ground. Continuous training in combined air and mountain operations will obviously in future be an essential preparation for mountain warfare.

RECOGNITION OF MOUNTAIN COUNTRY

Before operations are undertaken in mountain country it is essential that those in command should have some idea of what kind of mountain country it is, how far it only offers opportunities for highly trained mountain troops or can be negotiated by less specialised troops, possibly following up skirmishing and reconnaissance patrols by regular mountain fighters. Maps, however closely contoured, can give little guidance to those who are not themselves accustomed to read them as part of their mountaineering experience. That applies even more, perhaps, to visual reconnaissance. What, seen foreshortened, appears to the untrained eye an almost vertical mountain wall may offer a whole series of easy approaches by ridges and gullies. What looks, in profile, a fairly easy slope may be a quite formidable mountaineering proposition. A vast steep snow face may be only an easy and safe trudge or may be liable to be swept by avalanches. A gentle inviting slope may conceal a network of impassable crevasses.

It is therefore important that the headquarters staff of all higher formations that operate in or move through mountain country should have attached to them officers with mountaineering experience. No less important is the availability to lower formations, brigades and battalions, of a few officers and men who can climb up to the natural observation posts afforded in mountain country. Air observation is no substitute for a continuous watch over all movement in the wide area that can sometimes be covered from even a comparatively minor peak.

TRAINING.

The object of training for mountain warfare is not to create sensational rock gymnasts or first class experts in snowcraft, whether on foot or on ski. It is to train men of good average physique, firstly, to move about freely with the minimum of unnecessary fatigue or danger over not too difficult rocky ground and to be able to follow a leader steadily on more dangerous snow and ice, secondly to find their way about in mountain country at all hours and in all weathers and, thirdly, to do these things as normal incidents of their primary business of fighting.

The foundation of all mountain work, whether on mere steep slopes, on snow or on ice, is the mountain walk. That peculiar easy movement and the instinctive and assured balance that goes with it are nine-tenths of mountaineering. On steep rocks it is supplemented by a modicum of help from the hands; on ice and snow by the ice-axe which cuts a step

on which to stand and helps to steady the balance. But the mountain walk is the foundation of everything, and no troops who have not thoroughly mastered it can stand up to the tremendous physical test of long and arduous climbs with heavy kit and with the strain of fighting superadded.

The second essential in mountain training is to enable men to find their way about. They will, in actual warfare, be inevitably broken up into small detachments and, when it comes to fighting, even be scattered individually, over large areas of highly diversified mountain face and gully. They must know, not only how to pick the most feasible line to their immediately assigned objective in the attack, but at all times to find the best way, up or down or laterally, to any destination. To give that sense of the freedom of the mountains which comes with the confident knowledge that you can find your way anywhere, is indispensable to getting rid of the depression and even terror and physical exhaustion which can speedily overcome the novice lost on a mountain side, especially in bad weather.

The third essential is to correlate the instincts thus acquired to the business of fighting. The mountain fighter will have to think of routes up a mountain from the point of view of their concealment for the purposes of surprise, and of the actual mountain face, when in action, from the point of view not only of facility of ascent but of cover from fire. At Majuba, at Nicholson's Nek, at Spion Kop, and on more than one other occasion the Boers, with greatly inferior numbers, successfully captured steep mountain heights with the very minimum of loss owing to their own skill in taking cover and to our own lack of skill in exposing ourselves on a sky line. The mountain fighter must also acquire the stalker's eye for any movement which may indicate an enemy.

Skiing is primarily a means of locomotion in any snow-covered country and only incidentally so in mountain country, in so far as it is apt to be snow-covered for some or all of the year in relatively warmer climates. Where troops are likely to be employed in regions continually snow-covered for a considerable period of the year and down to fairly low levels, it may be worth while teaching on a fairly large scale. Otherwise its usefulness for military purposes is limited by the fact that at the lower levels snow may be discontinuous and that ski are a heavy burden to carry. This limitation may apply equally at the higher levels if the mountains are steep and rocky, in addition to which skiing on really steep ground requires considerable proficiency. To some extent these objections can be overcome by substituting shorter and lighter ski for the longer and faster ski used for sporting purposes. Ski patrols may be useful even in country where it would not be worth while trying to move large numbers by this method. But from the point of what is most likely to be required in the greatest variety of mountain countries and over the whole year I should make ski training very definitely secondary to all round mountain work on foot. In any case opportunities for ski training are not easy to provide in

these islands, while the essential groundwork of ordinary mountaineering can be taught in Wales, the Lakes and Scotland, even with some approach to Alpine conditions from January to April.

Apart from its immediate application to mountain warfare, training in mountain country has a more general value as developing to a greater extent than any other sport physical endurance, all round soundness of wind and limb, an eye for ground and an ability to find one's way. It teaches steadiness and nerve under dangerous conditions. There can be no better test of steadiness under fire than moving safely and steadily in one's ice steps in a stoneswept gully, if the crossing of such a gully is unavoidable. Nor is there any better training in team work on a small scale than is afforded by working together on a rope, or in individual logistics than packing one's own rucksack for an expedition of several days' duration. The ascent of an unknown mountain provides, indeed, many of the features of a military operation: the planning of the strategic approach, the overcoming of the tactical difficulties of the actual climb, the element of the unknown which may upset the best plan and the best time table, the formidable hazards of the weather. All these provide an exacting test for leadership.

Mountaineering, therefore, as a sport especially in unexplored or at any rate unfamiliar country, affords an ideal training for officers, regardless of whether they belong to units specially trained for mountain warfare. Such officers may, indeed, be invaluable if ordinary troops have to be trained for mountain warfare in an emergency. In the South African War very useful mounted infantry was raised in large numbers from men who had never ridden a horse by the help of good horsemen and horse-masters drawn from the cavalry or from hunting men in other units. There is no reason why special mountaineering courses for officers and selected N.C.O.s and men of all arms, but more particularly in the infantry, should not be held regularly in this country and in the Alps or in Canada.

In this connection it is to be hoped that the recent experiment of a short mountaineering course for a small picked body of Army Cadets will be followed up and become a permanent institution. While it may be true that only a few hundred a year can be trained in that way, a large proportion of those so trained will become keen climbers on their own and teach others. Moreover, the treating of a mountaineering course as the climax of the Army Cadets' ambition, as boat sailing is of the Naval Cadets and glider flying of the Air Training Corps, may have a very potent effect in interesting the whole boyhood of the nation in mountaineering, with incalculable effects on the general health of the nation as well as in the provision of finer all round material for the Army in the hour of need.