

The winter. A time of year when the mountaineer relaxes a little and is, perhaps, a little less careful to keep himself fit: Festive times approach and more hours are spent at the bar. Thoughts go back to the great events of the summer, and everyone thrills to the recollection of hard routes, well done.

But whilst thinking and talking and, we trust, enlarging on the past desperate activities let us not be unmindful of the coming winter, and the longed for possibilities of its providing our mountains with snow, ice and bad conditions for our sport.

Then, as the new year advances, with the festivities behind us, we can forge ahead with new skills and gained experience, toward an even greater summer season.

The nucleus of active members of our club has advanced from strength to strength this year in mountain activity. Yet, how pitifully, indeed how alarmingly small this nucleous is. Alaming, because the club surely has little apart from accommodation to attract useful members, and it will have to be admitted that the keenest and most desirable potential member is not over concerned about accommodation.

We have to be alive to the necessity not only for attracting new active members but for keeping the few that we already have. It is all very fine to plead loyalty and speak of being a good club member (whatever that may necessarily mean), but an individual joins a sporting organisation to help him indulge in his chosen sport, not only to talk of it and look at pictures on the wall. Surely the active member cannot be expected to prejudice his abilities out of all proportion by holdins back, and must perforce look elsewhere for a more suitable environment for the advancement of his activities. Without its active members a sporting club ceases to have any meaning.

It is the editors considered opinion that this club is the more remarkable for existing and, in many ways, thriving, where there is really so little room for it. Furthermore, it will rise or fall by its ability or not to attract young people new to the sport. These, and these only, are the people who will keep the club going through the years. Let there be no mis-understanding of this. Seasoned mountaineers will obviously already belong to their chosen organisation and those taking up new residence will know already of the famous clubs. Unless we wish to cater solely for semi-active mountain lovers we must re-course to attracting beginners and to training them with the means at our disposal.

The basic keenness for the club as a club is present amongst the membership now, re-assuringly indicated by the response to the Tyn Lon appeal. The depth of appreciation is there - perhaps a little know-how is lacking.

Let us, therefore, be brutally aware of some outward ignorance of modern mountaineering matters and personalities.

Let us think on these things and let us decide whether or not the club can exist for its own sake.
M. KING.

Opinions expressed in this News Letter are those of the editor and are not necessarily endorsed by the Committee.

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Tyn Lon Progress. Thanks to the great efforts of Ken Reynolds (ably supported), we now have full electric lighting at the drop of a coin (one shilling):

The completion of the drainage system is still held up pending a satisfactory way-leave agreement with Vaynol Estates.

When a final agreement is reached a large and strong digging party will again be needed.

The downstairs small room floor disappeared one afternoon, but has since been replaced in a different form, though now the fireplace above it has disappeared in turn!

Final decoration of the larger upstairs room is nearly complete and further decorating work in the large cottage should soon follow.

Access to the outhouse from the cottages has at last been provided but members are advised of the difficult rock scrambling involved en route.

Contact has been made with the water supply authority and plumbing work for water supply should soon commence.

Plenty of work still remains to be done on the walls and floors, particularly of the kitchens and outhouse, so that working parties are still very much needed; and volunteers should contact the Chairman for dotails.

For many years in this country we have watched "a throng before the crib" of virgin rock followed by the same dreary facts about first ascents; the superiority complex in search of doubtfurl immortality:

A good cliff climber is no more of a mountaineer than a bad walker.

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ONLY THE G's COUNT Extracts from essays by William Siri on belays and belaying theory.
A brief review of the energetics of falling will give us a working conception of dynamic factors involved. Work or energy is defined as the distance travelled by an object times the force boosting it along. In a free fall the force is gravity and the kinetic energy developed is simply the distance of the fall times the weight. A 50 pound man falling 20 feet develops enough energy to operate a 60 watt bulb for one minute! The same amount of energy must be absorbed in arresting the fall, and nearly all of it appears as heat because it is absorbed almost wholly by frictional forces.
... the speed of arrest is the most important factor in belaying. It determines the restraining tension in the rope and consequently the forces on pitons and belayer as well; . . the faster the stop the greater the tension.

If a climber -- falling 20 feet -- is brought to rest in 2 feet, the deceleration is then 10 g and the tension $(10+1)$ X $150=1,650$ lbs. It may be argued that nylon rope will safely handle this load, but the real question is: Will the falling leader, the belayer, or the piton(i.e. belay, Ed.) yield.

The author, who weighs 155 pounds, has sustained decelerations of about 9 g in test falls with a rope waist loop, but he was careful to remain upright. The most intelligent guess places the limit (of maximum deceleration without mortal injury) at about log for the usual lean mountaineer. This probably is still too great for unfavourable positions of the body.

-     - as the chance of being erect at the crucial moment is rather small let us set at 6 g the maximum deceleration to which a man is ever to be subjected. .-. the strength of $7 / 16$ inch nylon rope far exceeds the tension which can irreperably damage a falling climber.

[^0]time to fall 200 feet). For this brief but crucial time his single function is that of an animated friction brake. It is his job to absorb the leaders ill gotten kinetic energy at a rate which on the one hand will not strain to the breaking point the leader, the rope, pitons and himself, and -- will arrest the fall as quickly as possible to minimise the leaders wear and tear on rocks en route.
(Tests made with a Dillon dynamometer)
Belay failure meant collapse beyond the point where the belayer could effectively control the rope. In extreme cases, the belayer was wrenched bodily from his location and only the anchor rope prevented early re-union with his ancestors. More often, failure resulted from collapse of the legs or back and from being twisted out of position by the high torsional moment --.. In the most secure belay positions when collapse did not occur, rope slippage and pain placed an upper limit on the tension he could hold.
(Belay positions). The sitting hip belay with good foot support is by all odds the most secure and effective as well as the most comfortable position of any tested.
(Seated on a ledge with feet dangling over the side) The strength of this position was unsuspected until a dozen or more tests revealed that it is nearly impossible to dislodge the belayer before the first yields at 300 to 500 pounds tension from pain or rope slippage. It has, however, an important qualification. The rope should pass around the hips as low as possible and it must pass over the thigh and directly down between the legs. It may be noted too that a seat on the lip of the ledge with no foot support is often preferable to a sitting belay farther back if it offers only minimal foot support -- the greater the rope tension, the greater the force on the seat of the pants --.

In brief, utter failure with loss of rope control is unlikely in the seated hip belay.
(Standing belay). With both feet together, the belayer was pulled off with less than 100 lbs tension unless the rope ran straight down over a ledge, or he was anchored under tension.

The results here strongly suggest, however, when belaying the leader the belayer should always securely anchor himself with a taut rope, preferably to a point at least waist-high and as close as possible to his waist loop. (Obvious - Ed.)

It goes without saying (also) that the end of the rope (up) to the leader should pass around the belayer on the side adjacent to the wall. The torsional moment will then pull him against the rock to give additional support, rather than off into space.
(Standing shoulder belay). Bent knees in any standing belay are a guarantee of early collapse. (Thus) the argument for the virtues (in this position) of "give" from leg flexion is unfounded. Fortunately the shoulder belay does not lend itself to belaying the leader (and) -- it is difficult to see where this belay is justified under any circumstances other than premeditated homicide.
(Coefficients of friction of the human dynamic brake). The law for "snubbing posts" says that the load I which can be held by a tension $t$ at the free end of the rope increases very rapidly with the angle around the post. -- nylon ropes were tested on belayers large and small, wearing cotton, wool and leather jackets, and at angles of 90, 180 and 270 degrees around the body. Under all conditions the coefficient of friction, $\mathbb{X}$, for dry nylon rope varied from 0.55 to 0.72 per radian. The kind of clothing made little difference and size of waistline has no influence; a neat 25 is as effective as a beer laden 50 inches.
(Thus) -- for every 60 degrees around the waist, the tension which can be held by hand "doubles". A force of 20 lbs will hold a tension of -- 320 lbs at 240 degrees .-. to arrest a fall it is only necessary to increase the angle beyond the normal 180 degree position in order to develop a very great restraining tension at the cost of very little effort. -- the belayer must increase the angle by wrapping the rope farther around his body before he grips the rope more tightly. (Cross over the hands sharply then apply the brakes. Ed)
(Further points) _- nothing is gained by stopping a fall too gradually except a greater likelihood of badly injuring the leader on rock, or worse, by his hitting "bottom". (This point has got to be judged, part of the seconds' responsibility of anticipation. Ed.)
(The leader shows) folly in advancing so far that the belayer is left with too little rope to arrest a fall dynamically. The safe advance for a 150 lb leader is about 65 feet.
(If runners are used) the belayer must exercise more caution in applying tension because of its great multiplication by karabiners and rock. (Fine judgement again. Ed.)
(The leader should) not go beyond the last piton (runner) a distance more than three quarters of the length of rope the belayer still has on hand. (The theory of this is complex but sound. Ed.)

An amchor rope does not help to resist (any) twisting force (which must inevitably take place. Anything up to 140 footpounds of moment).
(Snow and ice..) The belayer is in a far less secure position and generally cannot count on much aid from frictional forces. The combined ice-axe-body belay seems one of the most reliable, if the axe is held in with a foot.
--the do's and don'ts of belaying (on rock), can best be summarized as follows: don't stand when you can sit; do use an anchor; do use rock and karabiner friction (runners) but don't overdo it; don't advance more than 70 feet on a pitch without hardware (:) don't advance more than three quarters feet beyond the last piton; and do, please, arrest the fall.

BRAICH TY DU. Climbers Club guide Vol. VII - The Carneddau. This crag is well worth a visit. Fifteen minutes or less from the road it gives better climbing than the Milestone on much rougher rock.

It is possibly best approached by jumping the wall at Pont-y-bencloc (Mervyn's!) below the stream, and branching left up over a slabby rock (scratched), along a defined track and then contouring left under the first well defined crag, which could yield some short routes. Next comes a gully up on the right full of comparitively recent avalanche debris. This gully divides higher and the crag dividing it gives a route, Introvert, easy severe.

The next crag is $G$ buttress and a broken wall leads up to the foot of it. All the rest is now easily defined from the Guide book. The writers party was defeated on Withershins. The crux is an overhanging corner crack, quite holdless and too wide for jamming. The corner obviously has to be bridged in some way but holds on the right wall appear to have broken away.

Solution to the Editor, please!
In places the rock resembles that of the Three cliffs in smaller scale, but as it is nothing like so frequently climbed on it has to be carefully handled. The walls of the major gully, openings seem particularly friable. 'A' buttress is very rotten and should only be attempted in pursuit of experience in this sort of work.

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The following may be obtained from the General Secretary: 1. Ramblers News. 2. R.A.- Bed breakfast and Bus Guide. 3. Details of Swiss Mountaineering School.
4. Information of B.M.C. circulars.

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Photography Notes. Members are invited to contribute to this item in future News Letters. We have some grood photographers in the club who must surely have many useful comments to make for the benefit of the records. In the meantime, here follows some jottings from various texts.

Subjects have to be sought for they don't exist ready made. In documentary or record work the ideal is a natural impression of the hills; the measure of a good photograph is in how near it approaches that ideal.

Perspective and scale need careful attention. There is less to object to in molehills being shown as mountains, than in mountains being shown as molehills.

The great expanse of the mountain scene does impose a handicap in that changes of viewpoint are not always easy to make, but a choice of lenses of differing focal length helps to overcome this difficulty.

Mountains are individuals, and deserve careful study from all angles.

A quick eye allied to an ability to see an interesting situation before it develops are the chief aids to securing good pictures of climbing.

Good photographs of climbs are most likely to be taken by men of experience in both climbing and photography, for each demands an olmost automatic technique.

A brief note of key exposures should be carried, as there may be no time to consult exposure meters or tables on hard routes. * * $\because * * * *$

The strongest mountaineering party is one in which each member has implicit confidence in all his companions, recognises their vital importance to the common effort and feels himself to have an indispensable part to play. E. Shipton.

A club party have done Spectre on Clogwyn-y-grochan in very good time. They had to, it was supposed to be a working party: * * * * * * *

SOME THOUGHTS ON BIVOUACS. by C.T. Jones.
Many hard routes in the Alps take a number of days to complete and then bivouacs are necessary.

It is probably not safe or desirable to climb harder than
mild severe with a rucksack. Therefore, apart from the normal climbing rope connecting the party, a sack-bauling rope is necessary. This should be medium or line. Line is perfectly adequate and is light, but it is painful on the hands whilst hauling and care must be taken that the line does not catch in cracks when it is thrown down.

Care should also be taken with ice-axes, for the writer was nearly split in two after a rubber retaining ring on a sack had worn through.

It is obvious that a duvet is a necessity for bivouac purposes. It will be too hot during the day to climb in so a normal anorak is also desirable. This, then, does away with a duvet hood or balaclava.

Frostbite of fingers and toes is, of course, the danger with all high bivouacs. We should therefore consider the best methods of preventing this.

In 1950, Anderl Heckneir (who did the first ascent of the Eigerwand in 1938) came to Chamonix to give a lecture. The Walker Spur of the Grandes Jorasses was in very bad condition, but Heckneir went on it, with a companion and completed the route in three days. His companion suffered severe frostbite, but Heckmeir did not. The intrepid German had covered himself with a Thermogene type of wadding. This sets up a slight skin irritation and causes inflamation, ensuring that the blood circulation increases.

This wadding was used by a party at about 10,500 feet on the Blaitiere, and it was found to be very effective. The slight burning sensation was not unpleasant. Care should be taken, however, to remove the wadding in the morning as the burning can become very bad if the wadding gets damp through sweat.

Duvet gloves can be bought for about $25 /-$ and are certainly very warm.

Current practice seems to favour the plastic bag for people to bivouac in. Condensation is, however, the great danger and it is felt that it should only come down to about hip level and not all the way. There should be sufficient space, howevers to bring the legs in in case of rain or bad weather.

One solid fuel stove is not really adequate, and food takes a long time to cook or heat. A small primus or petrol stove would appear to be the best.

Don't forget to have a torch AND a candle, to save the battery. It is a thorny problem whether to take one "brewcan" or two. Cleaning is a difficult problem, and a stew-tasting lemon drink at 2 a.m. is highly unpleasant.

Hot lemon drinks are very sustaining and thirst quenching. Remember that the boiling point of water goes down as altitude
increases, and therefore tea will be less palatable.
A rucksack is used to put the feet in, and so it is around the hips and middle that the cold is really felt, A very thick pair of pants is an asset. (The writer can supply one or two pairs of Mafeking type:)

Put crampons, pegs, etc. in a safe place or hans them from pitons as it is easy to kick gear down in the early morning darkness.

THE MIDLAND ASSOCIATION OF MOUNTAINEERS. As has already been announced the M.A.M. have been kind enaugh to offer our members attendance at their lectures.

The Editor is pleased to publish the forthcoming programme. Thursday, 22nd January, 1959.

Thursday, l2th, Febraury,
Thursday, 26th February
Thursday, 12th March.

Thursday, 24th March.

For us the mountains had been a natural field of activity where, playing on the frontiers of life and death, we had found the freedom for which we were blindly groping and which was as necessary to us as bread. Maurice Herzog.

If mountaineering interferes with business - Give up business:
'Bun' Dalley offers for members use maps and notes of the complete traverse of the Pennine Way from Kinder Scout to the Border: the best of luck!
"Life is no more itself, it's hardy invincible self than on the crown of the Pennine. There the land lies black for mile after mile of soaked bog, just endless hummocks of peat...." C. E. Montague.

The Enitor is pleased to draw members attention to the invitation by the Mountain Club (Stafford) to join in with their outdoor meets. This excellent keen club has several worthy performers and has opened up a cliff in the Arrans for which a provisional guide is now obtainable.

It will be tremendously advantageous to foster good
relationships with this well-known club.
Members attention must be given to B.M.C. Circular No. 265 which should be exhibited on the Notice Board.
It calls attention to the dangers of using $\frac{5}{8}$ " nylon for belay loops. The breakage of a loop of this size resulted in the death of two experienced and able climbers on Main Wall.

Belay loops should be of the same quality and size as the main climbing rope. Where the size of the belay prevents this the heaviest possible loop should be used and it should be protected where it lies on the rock.

Mountain Rescue Committee Handbook.
This handbook has been recently revised and
reprinted. It may be purchased from the Secretary of the Mountain Rescue Committee, Hill House, Cheadle Hulme, Stockport, Cheshire. price $1 /-$ per copy including postage.

Members are encouraged to buy a copy for themselves.
The purchase of Harrisons Rocks, Groombridge, Kent, by the
C.C.P.R. for a nominal sum provided by the B.M.C. is now complete. Members finding themselves in that area for any reason and wishing to climb here (and it is extremely hard climbing) are asked to preserve the conditions leid down: viz. No camping, bivouacing or lighting of fires, no trespass on adjoining properties. Furthermore (and this applies anywhere) TAKE ALL LITTER HONE:

North Wales Coach Meet. 18th-20th October, 1958.
On thia meet most members, as arranged, spent Saturday on the Glyder Fach Cliff. In very low cloud the party made the ascent to the cliff to find the rock cold and wet.

Conditions, in fact, were not encouraging but everyone had at least one climb, though activity was principally confined to the Alphabet Slab.

Note - We learned later that one member staying at "Pen Ceunant" did the Snowdon Horseshoe in brilliant sunshine above the clouds.

Sunday showed much improvement in the weather, but after the experience of Clyder Fach lower crags were sought, in particular the Milestone. Some people, however, did go higher and two gentlemen had an excellent day's climbing on Tryfaen's East Face, again above the clouds.
J. Daffern. Meet Leader.

Mountaineering is a sport, and not a game, governed by no
man-made rules, but rather by certain precepts which it is dangerous, if not fatal, to ignore.

It should be noted that one of members was buried under eight feet of hay for a lengthy period during a recent clash with the B.A.I. Members are requested to accord all possible support for our 'front line' fighters:

Report on the Meet of June 18th-20th, 1989. by J. Daffern. This meet was a great success and some notable ascents were made. Climbers concentrated on the Kropa Group, which, of course, is the higher mountain area of the great Ankora crater, where the walls are very steep and holdless and offer reasonable sport. Most of us were content with the Standard routes worked out by the pioneers of the 1960's. It is still remarkable how they managed to climb with those funny suits and heavy boots to keep them from groing up too quickly, and all the time wondering what terrible creatures they might find! ... huh:

The tigers of the club, however, were not satisfied and went off to have a look at two new routes of greater severity. The first of these was put up by Douglas C. Peabody two years ago, but another climb, The Red Slab, is claimed by its originator (A. Splogovitch), to be in a far higher class. Our members tackled this one.

At one point a holdless wall confronted them, and the leader was compelled to make a mighty leap to a spike fully thirty feet above and to one side. The leader pulled up the rest of the party to save time, and the climb was later abandoned. Someone expressed the wish that this climb were near home, where of course it would be impossible:

Not to be outdone, however, they made their own new route, a short and comparatively easy one, and the Union Jack was left at the top.

Yes, an enjoyable meet, blessed with a full moon. Only one minor criticism was received, - the rocket was late getting back to the launching pad.

The dinner and fastivities to mark the opening of Tyn Lon have, for various reasons, been postponed to a more favourable date in the Spring of 1959. This does not necessarily mean that the premises will not be available for limited use beforehand.

It is with pleasure and thanks to the Cave \& Crag Club that we announce an open invitation to our members for the John Neil and Mike Harris illustrated talk on the recent Caucasion expedition. This is scheduled to take place at The Friends Institute, 7th January, 1959.


[^0]:    belayer -.- ie belayer --. is sole master of the affair for 3.5 seconds (the

