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NEXT ISSUE

Winter 2018 includes Sight guiding in the Arctic, Climbing equipment standards – part 2. Copy deadline: Friday 19 October 2018.

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Our front cover

Donna Evans leading *The Crack* VD and Stephen Hobbell belaying on *Just Another Route* VS4c. Porth y Ffnon, Pembrokeshire during an MTA North Wales regional social climbing trip.

Woodland Carbon scheme

CO₂ emissions from the production of the paper used in this magazine has been offset by planting native woodland in the UK, through the Woodland Trust and the Woodland Carbon scheme.



PHOTO Steve climbing in Rio. © Angus Kille.

EDITORIAL

Previously I commented in this magazine about the demise of many of our Adventure Education Centres.

There is now a growing trend toward private capital investment in structures that provide excitement with minimal commitment (apart from pre-booking) which are attracting tourists in unprecedented numbers.

For example, Zipworld in Snowdonia had over 300,000 visitors in 2017 with numbers growing at 54% annually. Personally, I balk at the use of the word “adventure” in their marketing and in the press coverage of the activity – although *The Telegraph* reporter did admit that the zipline “requires zero talent; even a sack of potatoes could do it. But the exhilaration when I step back on *terra firma* is intoxicating”.

This influx of “adventurers” is an opportunity, and that is what I would like to focus on here. We need to recognise the factors that make these facilities so attractive and capitalise on this. Perhaps it’s the “Uncertainty of Outcome” that makes true adventure less appetising for newbies? Maybe a dormant interest is sparked, or more likely a thirst for the “next challenge”. Clearly it’s not about cash, if a family can afford an average of £80 each for a couple of hours. We represent the key to that next challenge for these masses that are thronging to the National Parks and emerging from

canned adventures. This is no replacement for the equal access philosophy of the heyday of Outdoor Education, but it is a pragmatic approach to the reality of the decades of austerity that followed the banking crash.

This edition focusses on the skills and knowledge that can make our services very attractive to the newly awakened devotees, covering many aspects of leadership and communication, the keys to satisfying these demands. We learn to understand the mountain environment and the complex interaction between climate, geology, plants and animals and help to ignite the kindling curiosity. They want assurance of something fulfilling, preferably with some Instagram opportunities. They want to travel efficiently and safely through the mountains and up the crags. Some want to be guided, others to learn with a support structure. We are the key to a world of adventure, whether led or assisted on that journey.

This magazine is also embarking on a journey to reduce its environmental footprint; first with a carbon-offset paper project and next exploring packaging. Watch this space!

Steve Long
Technical editor

OUR COVER



Paul Poole

Paul runs his own mountaineering business based in North Wales, offering climbing, mountaineering and Mountain Training courses. E ppmountaineering@me.com W www.paulpoolemountaineering.co.uk

OUR AUTUMN ISSUE CONTRIBUTORS INCLUDE



Julian Cartwright

Julian is a half-Macedonian self-employed engineer, stock photographer and Mountain Leader from Wolverhampton. When not exploring the wilds of Macedonia, he can often be found in his other favourite ‘donia’, Snowdonia.



Ian Fenton

Ian has been a provider of Mountain Training climbing qualifications since their inception and still provides courses and climbs as much as possible. He spends an increasing amount of time in Orpierre.



Will Legon

Will is an MTA member and founded and runs Will4Adventure. He considers himself to be a ‘Blessed Man’, taking people walking and climbing for a living and running outdoor and expedition first aid courses.



Dr Jade Phillips

Jade is a Climbing Wall Instructor and Mountain Leader trainee. She has a PhD from the University of Birmingham in conservation of plant genetics and food security. She is most likely found climbing, running and foraging around the hills.

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Feeling inspired? If you would like to contribute to the next issue, please contact **Belinda Buckingham** at belinda@mountain-training.org

Fancy advertising? If you would like to advertise in the next issue, please contact **Caroline Davenport** at caroline@media-solution.co.uk

NEWS



THE ASSOCIATION OF MOUNTAINEERING INSTRUCTORS (AMI)

AMI has been keeping busy over the summer, the headline being the continued work from the renaming working group under Paul Platt. They have taken the information from the survey as well as the comments on Facebook and will sit again to review the potential titles in preparation for a vote at the AGM. On that note, please ensure you have ticked your AMI email subscription on CMS so that we can keep you informed and ensure that you are able to vote on this and other important decisions. We are looking for the next group of MIC trainee mentors, so if you are interested and have the requisite experience then please contact Sandy the Development Officer.

The joint AMI/MTA 'All things coaching' weekend will be taking place in the Peak District on 10-11th November. This is an excellent opportunity to socialise with a host of leaders and instructors as well as update your CPD (details on CMS). Time is fast approaching for the AGM (Glenmore Lodge 13th Jan 2019). The workshops are now on CMS and we would recommend booking early to avoid disappointment!

Finally, the committee will be discussing the future Development Plan for AMI. We will use the last member survey as the basis for that work, but if you have any burning issues please feel free to get in touch.

Guy Buckingham (Chairman)



AMI is the representative body for professionally qualified Mountaineering Instructors in the UK and Ireland and is committed to promoting good practice in all mountaineering instruction. Full members hold the Mountaineering Instructor Award (MIA) or higher award the Mountaineering Instructor Certificate (MIC).

T 01690 720123
www.ami.org.uk



BRITISH MOUNTAIN GUIDES (BMG)

It's with great sadness that I start by informing readers that BMG Guide Rob Wills passed away quietly at his summer home in Chamonix and our condolences go out to his partner Lizi and Rob's family.

This year once again the Arc'teryx Lakeland Revival and the Arc'teryx Alpine Academy were great successes involving many BMG members.

It's with great pleasure that we welcome John Crook as a newly qualified BMG IFMGA Mountain Guide. A number of other Aspirant Guides are also taking their final alpine exams this August and I wish them all the very best with this. It feels a very exciting time in the BMG with a healthy number of young Guides coming through the BMG Guides Training Scheme which is great to see.

The start of the Alpine summer season has been great, with the high volume of winter snow lasting well through into the current heatwave we're experiencing at the moment. Having said that, conditions in the mountains have changed dramatically and great caution and sensible decisions need to be made for venue choices.

The conditions in the UK have also been excellent, allowing great climbing and many fun outings into some of the more remote mountains and crags.

Mark Charlton (President)



The BMG is a member of the International Federation of Mountain Guides (IFMGA), currently comprising 24 nations worldwide, with growing membership, it is the professional organisation that trains and assesses Mountain Guides in all disciplines. A British Mountain Guide operates to the highest recognised level throughout the world, in all terrain and in diverse roles.

T 01690 720386
www.bmg.org.uk



THE BRITISH ASSOCIATION OF INTERNATIONAL MOUNTAIN LEADERS (BAIML)

The programme for the BAIML AGM in Buxton on 23rd-25th November is coming together with workshops currently being confirmed. Bookings will be open by the end of August.

On the working-abroad front there is now a procedure in place for people to apply to work in the Dolomites with other regions of Italy being worked upon.

For those of you who didn't realise, the BAIML office can write a letter attesting to your experience, up to date BAIML membership and qualification as an IML, indicating that your CPD and insurance are up to date for working professionally in other countries.

Montane have made a BAIML client offer for over the summer, and you can read the latest news and updates from the BAIML Montane Ambassadors on the BAIML Facebook page. On the Mountain Training front, BAIML secured permission from MTUK to progress the IML qualification onto a suitable qualification framework.

Best of luck to all those aspirants who have completed and are going through summer assessments and wishing you all an active and fulfilling summer and autumn season in the mountains! Share the fun and sunshine – it's hot, hot, hot – in Europe at least.

Anne Arran (President)



© Anne Arran

BAIML is the professional association for International Mountain Leaders (IMLs) in the UK. It represents the UK at UIMLA, the Union of International Mountain Leader Associations, which is the international governing body for IMLs. Full members hold the IML award and are committed to a dedicated CPD programme.

T 01690 720272
www.baiml.org



THE MOUNTAIN TRAINING ASSOCIATION (MTA)

MTA has some great opportunities coming your way this autumn, starting with the Yorkshire regional event taking place in Ilkley on the 22nd-23rd of September. We'll be hosting a number of "bridging the gap" workshops to support members who wish to bring their skills up to date with the Rock Climbing Instructor syllabus, or prepare for assessment after being trained under the SPA syllabus. We've also teamed up with AMI to offer an "all things coaching" event in the Peak District on the 10th- 11th November and the third and final geology e-learning module 'Mountain Destruction' will also go live, so if you haven't done Mountain Building and Rock Types now's your chance!

Our 12 month mentoring pilot got underway in June, so thank you to all those that volunteered to take part; we hope to learn from this in order to develop a mentoring programme appropriate for MTA and its members. Earlier this year we teamed up with the Met Office and ran a very successful specialist weather workshop for leaders. We're really excited to be rolling these workshops out around the UK this autumn and next year – keep your eyes on the workshop programme. Bookings are also now open for the Winter CPD Conference taking place at Glenmore Lodge on the 26th-27th January 2019.

Belinda Buckingham (Development Officer)



© Belinda Buckingham

The MTA is a membership organisation providing support and development opportunities for all candidates of Mountain Training. Promoting good practice and providing continued personal development opportunities as part of a UK-wide community of outdoor leaders. Full members hold one or more of the Mountain Training Awards.

T 01690 720272
www.mountain-training.org/mta



THE MOUNTAINS OF MACEDONIA

ABOVE The Kabash ridge – Korab massif.

Ask people their favourite European walking destinations and it's unlikely Macedonia will receive a single mention. Yet this sparsely populated Balkans republic has much to offer the adventurous hill walker.

WORDS AND PHOTOS BY
JULIAN CARTWRIGHT

Innumerable peaks rise to over 2000 metres, many lending themselves perfectly to long day walks in seemingly endless, pristine wilderness.

In terms of both access and interest the western half of Macedonia is our favoured destination, being home to the major mountain massifs and two international airports. The capital Skopje and the lakeside town of Ohrid make the best bases from which to explore.

For the first-time visitor, the following walks give a good taste of what Macedonia has to offer:



Julian Cartwright is a half-Macedonian self-employed engineer, stock photographer and Mountain Leader from Wolverhampton. When not exploring the wilds of Macedonia, he can often be found in his other favourite 'donia', Snowdonia. [@julianmountains](#)

Magaro

Most visitors to Macedonia end up in Ohrid, a picturesque town nestled on the shore of Lake Ohrid, one of the world's oldest lakes. Galičica ('*Galichitsa*') is the name of both a National Park and the mountain range it encompasses. It runs the length of Lake Ohrid, dividing it from its twin to the east, Lake Prespa. At the southern end of the range lies Magaro. At 2255m its summit is the highest point in the National Park, yet it offers one of the easiest and best walks in the area.

Magaro is separated from the rest of Galičica by the only road to pass over the range, which provides a convenient start point to this marvellous half-day excursion. The route begins in cool beech woods then climbs a rocky tunnel, before levelling out at an impressive amphitheatre, surrounded by towering white cliffs. The circular route to and from the summit follows the rim of these cliffs, up via grassy slopes and down via a dry gully. En-route, you'll stumble upon WW1 earthworks and probably marvel at the incongruous radio wave reflector – a throwback to communist Yugoslavia looking like a huge advertising hoarding stuck half way up a mountain. From the summit it's possible to see both Lakes Ohrid and Prespa in one sweeping panorama. Come here in spring and wild crocuses will be in bloom.

Titov Vrv

Drive west from Skopje on the E-65 motorway to Tetovo and a long chain of peaks soon fills your horizon. These are the Šar Planina, or Shar Mountains and form Macedonia's border with Kosovo.



1. View to Galicica National Park and Lake Ohrid from Magaro. 2. The ridge curling round to Bakardan (left) and Titov Vrv (back, right). 3. Cloud clearing from the summit of Korab.

The highest peak, Titov Vrv (Tito's Peak, 2747m) sits near the middle of the range and a walk to its summit, complete with old watchtower, is one not to be missed.

Titov Vrv is accessed from Popova Šapka, a ski resort in the hills overlooking Tetovo. The 'tourist' route takes a well-marked trail rising steadily for 12km across the flanks of intervening peaks to pop out at a col below the final summit. Fit parties should save this route for the return as there is a much better approach: Head straight up the hill behind Popova Šapka. This is Ceripašina (2531m) and its grassy, domed top is reached after a couple of hours of uphill toil. From Ceripašina, a great undulating ridge stretches south west to Titov Vrv. This rollercoaster ride dips and climbs for around 10km, crossing unnamed summits to the conical Bakardan, before dropping steeply to the col mentioned earlier. If you're lucky you'll see alpine chough up here.

After the final climb to Titov Vrv, it's some relief to know that it's downhill all the way back! Return to the col and take a moment to look at the lie of the land: Bakardan, Titov Vrv and sister peak Mal Turčin rise around a grassy cirque in almost perfect symmetry. Locals call this triumvirate *krunata*, the crown. A grassy path leaves the col for the flanks of Bakardan, leading easily and directly back to Popova Šapka.

Korab

Straddling the border in a wild and remote corner of Mavrovo National Park, the majestic, sprawling Korab (2764m) is the highest mountain in both Macedonia and Albania.

An out-and-back journey to the top begins from a remote border police outpost at Strežimir, reached after an 'entertaining' hour's drive up a badly rutted dirt track. A path leaves the wooded slopes around Strežimir for open hillside and steadily winds its way upwards. So far views have been limited. However as you crest a spur, suddenly there before you lies one of the finest views in Macedonia. Left, across a deep-cut valley lies the Kabaš ridge – a line of jagged teeth just aching to be climbed. Ahead lies Kobilino Pole, the mare's field, a vast grassland plateau punctuated by wild flowers and scattered flocks of sheep. At its head totter the immense, crumbling crags of Mal (little) Korab. The main summit, Golem (big) Korab appears as an unassuming grassy lump from here. The path continues, flanking around Kobilino Pole before striking upwards. It's not until the last few metres that the summit reveals its true character, as the ground gives way on three sides to reveal towering cliffs and a tighrope ridge crest leading precariously to two lower summits. Views are expansive, into the depths of Albania and Macedonia. The summit tower on Titov Vrv is often visible on a clear day.

Navigation

Many trails in Macedonia are marked with red/white flashes on rocks or trees, but few are maintained outside the popular areas so be prepared to hunt around for the correct route. Detailed 1:25k maps are available but obtaining them is difficult and shrouded in bureaucracy. More readily available are various 1:40k tourist hiking maps (poor quality, limited detail but better than nothing). Scans of 1950's Soviet 1:50k maps can be found online. Nowadays we use open source GPS mapping in conjunction with whatever paper maps we can get our hands on.

Mountain safety

Macedonian mountains offer relatively easy walking, typically through oak and beech woods lower down, becoming grassy and rocky with altitude. Summits generally comprise well weathered limestone and trails tend to stay clear of dangerous terrain. The biggest problems likely to be encountered are a lack of shelter and water. Even in the spring, temperatures can hit 30 degrees so make sure you and your party are well equipped to deal with the heat and full glare of the sun. Take plenty to drink and start early to take advantage of the cooler morning air. Mountain areas are typically remote and help is rarely a phone call away so it's wise to leave details of your route with your lodgings. Local weather forecasts a day or two before a walk are reliable in our experience.

Macedonia is home to brown bears and wolves but you are unlikely to encounter them. Even so, it doesn't hurt to make your presence known: talk loudly, particularly when entering wooded areas to ensure any beasts have time to run away. Also beware the indigenous Šarplaninec sheepdog. Trained to defend the flock from bear and wolf attack, they are likely to see you as a threat. If you find yourself wandering into a flock of sheep out on the mountain, just ensure the shepherd sees you before his dogs do!

When to visit:

May to October offers the best period for mountain walking, although July and August can be too hot.

Getting around:

Unless joining an organised walk or employing the services of a local guide, a car is pretty much essential to get around in Macedonia. If taking a group out, most towns will have at least one taxi driver with a 'kombi' (minibus), who can be hired by the day. ■



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SEPARATING FACT FROM FICTION:

The truth about climbing equipment standards

#1

As a Mountain Training course provider for the indoor climbing qualifications, I've always wanted to provide the best possible experience for my candidates. A recurring theme on courses has been candidates asking about specific breaking strains or tests on particular equipment.

WORDS BY ELLIS BIRD, PHOTO BY STEVE LONG

I've often found myself giving standard 'stock' answers (such as "this sling is rated at 22kN"), but often left asking myself 'is that actually the whole story'? Now, I might be a little bit of a kit geek, but this has become an area of interest for me and through my research I discovered some facts about the testing of equipment that I found very surprising. This has given me a new perspective on the strength of equipment that we all use and allows me to answer those questions with more accuracy.

The aim of this short series is to develop the knowledge of climbers and instructors to be better informed about the current European Norm (EN) standards rather than speculated myths. For example, a harness is tested to 22kN, like belay karabiners – or is it? Treat this series like a telephoto zoomed in on specific elements of these comprehensive standards. The series is written in two parts with textiles covered in part one, and metal ware and helmets in part two. Depending on your own geek rating you may choose not to digest each article in a single sitting; take your time and hopefully inform others on new-found knowledge about those mystical EN standards. I am a mountaineer and climber and not a qualified engineer, so to check my interpretations and ensure the information is factually correct, the articles have been peer reviewed by DMM.

I hope you will find the series informative and helpful in separating fact from fiction and possibly inspire you to question similar myths elsewhere in the mountaineering world.

Accessory Cord [BS EN 564:2014]

Myth: *Accessory cord is safe to set up bottom ropes.* A close friend moved to America and conformed to the local practice of rigging bottom ropes with 5 and 6mm cord. As you can imagine I was rather alarmed and questioned whether he would have used the practice on his Single Pitch Award assessment (now the Rock Climbing instructor qualification).

Reality: A single strand with a tensile strength of 3-5kN leaves very little

redundancy, comparable to the open gate strength of a karabiner – and that's before it is further weakened by tying a knot!

Accessory cord is tested to withstand a force and not absorb energy and therefore a tensile strength test is used where a force is gradually loaded. The EN looks at cord between 4-8mm diameter with a kern-mantle construction, and minimum tensile strength indicated in table 1.

Slings [BS EN 566:2017]

Myth: *Dyneema is the best/worst material for a sling.*

Reality: As with all kit, there are pros and cons. Nylon, is the original material for slings and still has many advantages, particularly price and its ability to stretch to up to 30% when loaded, reducing impact forces. This "stretchability" is lost in polyester, which has largely replaced nylon in Europe. It is also lost in Dyneema/Spectra, brand names for *Ultra High Molecular weight Polyethelene* (UHMwPE) – however this material is much lighter and less bulky, so can be added in various proportions to nylon to create thinner, lighter slings that are also significantly more resistant to abrasion and water absorption. Dyneema tapes are great where weight or bulk is an issue – for example extendable quickdraws for trad climbing. However, for belays and improvised lanyards the material has an important flaw – the low stretch and relatively low melt point means that knots weaken these slings quite dramatically, leading to situations where certain falls (e.g. direct on to the sling) could conceivably break the sling or an anchor.

Regardless of materials used, the EN and UIAA tests examine the same parameters. Slings can be either tape or cord stitched together to make a complete loop. If the sling is made of tape/webbing the stability of the weave is tested by loading a yarn (strand of the weave) under a load of 150g. During this test the weave must not unravel.

Similar to accessory cord, the whole sling is then exposed to a force and must meet a minimal tensile strength of 22kN.

TECHNICAL SKILLS

Cord Diameter in mm	Minimum Tensile Strength in kN
4	3.2
5	5.0
6	7.2
7	9.8
8	12.8

TABLE 1: Tensile strength of cord.

Type of Harness	Head Up in kN	Head Down In kN	Perpendicular from the waist
Full Body Harness	15	10	n/a
Small Full Body Harness	10	7	n/a
Sit Harness	15	n/a	10kN
Chest Harness	10	n/a	n/a

TABLE 2: The force applied in specific orientations.

Belay Lanyards (UIAA 109)

Myth: Now that a standard has been issued for lanyards, you can no longer make an improvised belay lanyard or cowstail out of slings!

Reality: To gain the UIAA safety label for a belay lanyard the manufacturers have to conform to the standard before they can sell the product, but although it may affect our practices it cannot dictate what we can and cannot do with other gear. However, the fact that the dynamic test is designed to minimise the peak force should give pause for thought: a sling cowstail should only be used for static loading.

There is no current EN standard for Belay Lanyards, however there is a new UIAA standard which has been used for this article. UIAA standards are globally recognised, but not a legal requirement.

The lanyard must have two termination ends and is attached to the harness using the recommended knot (e.g. larks foot). There is a tensile strength test where the lanyard must meet a minimum of 15kN and a dynamic test. The dynamic test uses an 80kg mass and involves 3 successive fall factor 2's with 5min between each fall. The peak force in the dynamic test cannot exceed 10kN. If the lanyard is adjustable it must not slip more than 50mm.

Harnesses (BS EN 12277:2015)

Myth: Harness is tested to 22kN.

Reality: The maximum required load on a harness is 15kN. Within the standard, four types of harnesses are covered: full body harness, small full body harness intended for climbers up to 40kg (children), sit harness and a chest harness. The harnesses are mounted on a dummy and tested in a variety of orientations dependant on their design. The harness is loaded, unloaded and loaded again to simulate real-world use. During this cycle the harness must hold the force seen in table 2, no load-bearing part can break and the buckles must not allow slippage greater than 20mm.

Dynamic Mountaineering Ropes (BS EN 892:2012)

Myth: A rope must be retired after the number of falls indicated on the manufacturers packaging.

Reality: The number of falls demonstrates how burly the rope is and many climbing falls don't come close to the fall factors used in testing.

Dynamic ropes undergo a variety of tests, of which this article will look at Sheath Slippage, Static Elongation, Dynamic Elongation, Peak force and Number of Drops. The information obtained by the manufacturer is then supplied to the consumer.

Sheath slippage is tested by being pulled through an apparatus with moving and fixed plates that apply a force of 0.005kN on the

Rope Type	Maximum Elongation in %
Single	10
Half	12
Twin (double strand)	10

TABLE 3: Maximum static elongation.

	Maximum Dynamic Elongation in % (after the first drop)	Maximum Peak Force in kN (during the first drop)	Minimum Number of Drops
Single	40	12	5
Half	40	8	5
Twin (double strand)	40	12	12

TABLE 4: Dynamic elongation, peak force and number of drops.

sheath of the rope. The amount of sheath to core slippage is recorded and must not exceed 1%.

Static elongation replicates gentle body weight loading of the rope with an 80kg mass being used for single, half and twin ropes.

The mass is gradually loaded without shock for 180sec before a 10min rest time. The sample is then loaded for another 60sec and the elongation is measured. The maximum static elongation can be seen in table 3.

The testing rig for **dynamic elongation, peak force** and the **number of drops** follow the same testing protocol. The rope is exposed to a 4.8m fall and with a fall factor of 1.75. Single and twin (double strand) ropes are tested with an 80kg falling mass and a half rope with a 55kg falling mass. During the number of drop test, if the rope breaks at the knot attached to the mass the test is consider invalid and started again. The load must be removed from the rope within 60sec and every consecutive drop must be completed 300sec after. The maximum and minimum standards for dynamic elongation, peak force and number of drops can be seen in table 4.

For instructional work we're probably more concerned with resistance to wear and dealing with small fall factors, as leader falls should be less likely. By contrast, for personal climbing weight and the rope's ability to deal with leader falls are often prime factors to consider. Therefore some of these tests are of more interest than others, depending on the intended main purpose for your rope.

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Ellis Bird is a Mountaineering Instructor and Mountain Training course provider. He is also a Senior Lecturer in Outdoor Adventure Education and University of Chichester.

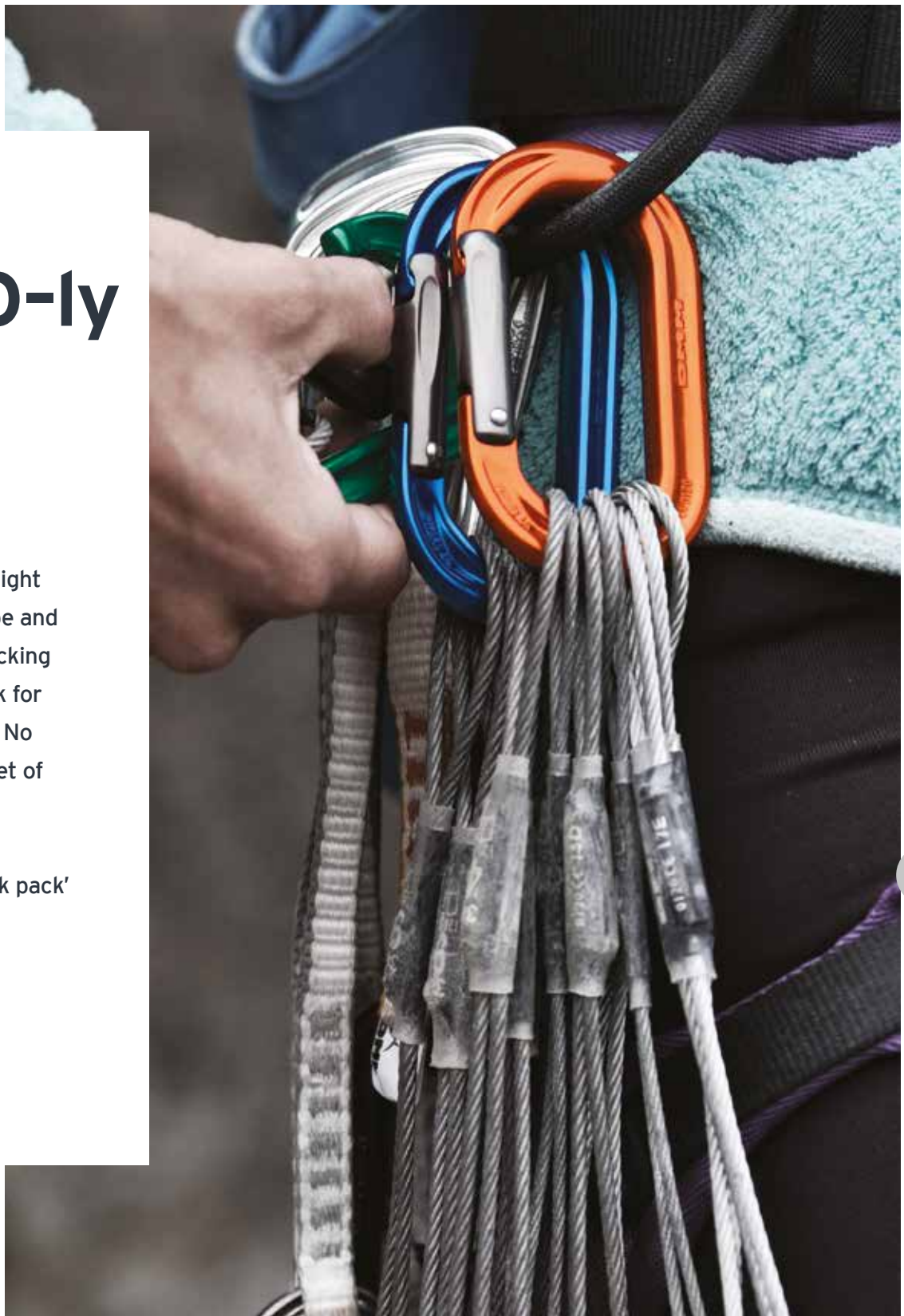
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PERSONAL AND PEER AFFIRMATION

ABOVE Cowboy Clipping, 'Right, Right' right hand clipping into right quickdraw.

As instructors we often give continual input to students. We might congratulate them along the way, but we rarely allow space/time for either the student to qualify how good they are at specific skills or to allow peers to 'compare notes' and assimilate whether they are comfortable with their level of expertise.



Ian Fenton has been a provider of Mountain Training climbing qualifications since their inception and still provides courses and climbs as much as possible. He spends an increasing amount of time in Orpierre where he has a small apartment available to all Association members.

He is currently using *The Professional Mountaineer* to keep his coaching tips up to date, following on from his *Climbing Wall Leading* publication.
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WORDS AND PHOTO BY IAN FENTON

I have suggested three activities below which may allow personal and peer affirmation of a person's skills. I have included the optional use of blindfolds, depending on the group. The skills are the basic 'safety' components of all climbing activity: tying into a harness, putting a belay device on a rope, belaying safely; and clipping (or unclipping) quickdraws. Each of these actions will be repeated hundreds of times during a climber's life so they need to become completely autonomous.

These activities can either be led throughout by the instructor, or preferably delegated to a peer group – students often hear too much from instructors, which can limit the quality or quantity of introspection.

When completing sessions with students/clients I believe it is good to use the most appropriate equipment possible for them, so ideally, they should use their own gear – but remember that practicing clipping with dated quickdraws, and old karabiners is more difficult than more modern ones.

Bad tools lead to poor practice.

If you or a facility is providing the gear, use the best available – don't use some tatty two metres of rope cut from the end of an old bottom rope to practice knotting and clipping! Folk with small hands may benefit from lower diameter rope to practice with.

The activities:

1 One Voice

This activity is ideally done in threes. Often when groups are learning skills and practicing bottom roping, they operate in teams of three, climber, belayer and back-up.

When you observe them tying on and putting the belay device on the rope you may push them a little and ask them to complete these actions whilst looking away. The 'back-up' person can only check their knot and belay device when they say they are complete. If correct, this shows they are well on the way to completing the action 'autonomously' or demonstrating 'unconscious competence' of the skill.

The group will still tend to look to you for confirmation that all is ok – resist! The next stage is to ask the climber to choose a route to climb and stand ready to start tying on. The belayer should stand in a position to belay the route and at this point they are blind folded. The only person allowed to speak is the 'back up'. The 'back-up' places the rope in the climber's hands and the climber must then prepare and tie on correctly. The 'back-up' places a belay device in the hands of the belayer, followed by the belay rope. The belayer must put them together correctly and clip into their harness. The 'back up' then checks everything is ok, asks the belayer to start belaying and coaches the climber up the climb, with appropriate verbal input to the lowering point, whilst actually backing up the belayer.

The only voice that can be heard is the 'back-up', and prior to coaching the climber it should only be for a safety issue.

If a team of three can successfully rotate through each of the roles, they will demonstrate they have a high skill level. They may also complete this activity without any instructor input.

These skills are repeated throughout a climber's life; improved awareness increases their safety margins.

2 Cowboy Clipping

This activity is often used to ensure that a climber is efficient in clipping quickdraws before commencing lead climbing. It is normally floor based, with a pair of quickdraws at an optimum clip height for the climber, with a short length of rope that can be pulled through after they have clipped. They practice clipping various combinations of hand and karabiner orientation, until they can do the action without thinking; again an autonomous action, i.e. being "unconsciously competent" at clipping.

An effective way to highlight how good they are is to have them complete a set of various clips, then without moving them, blind fold them, and ask them to complete the various clips again (try this yourself to check how good you are!).

3 Clock Clip

This is another way of extending clipping skills before a climber commences leading, or a way of fine-tuning various clipping positions. An area of wall (often a traverse wall) where there is a good selection of hand holds and foot holds is best. Quickdraws are positioned at the points of 1, 3, 5, 7, 9 and 11 o'clock on an imaginary clock face of a diameter that allows the climber to hang from a straight arm from a

selection of holds, and clip 1 and 11 o'clock quickdraws at about head height. 5 and 7 o'clock should be at about knee height.

The climber then stands on the wall with their harness on and equipped with a short (two metre) length of rope. They are then encouraged to get into the most comfortable position for them to clip the various quickdraws. It seems to be simplest to start off working around the clock with sympathetic hands, so ask the climber on the wall to clip 1 o'clock with their right hand, then 3, and 5, again pulling the rope after each. Then ask them to clip 11, 9, 7 o'clock with their left, hand, and then complete opposites, i.e. 1, 3, 5 o'clock with their left and 11, 9, 7 with their right etc. This introduces the idea of 'clipping through' if they are to one side of a quickdraw, rather than swapping hands on a hold, then swapping back. When they have the idea of how Clock Clip works, randomise the instructions, so they have to continually modify their body position to be in the optimum straight arm position for a clip. This activity can also be videoed very easily to give feedback. It can also be used to develop clipping skills for sport climbing; the Clock Clip is prepared without quickdraws and the climber practices removing quickdraws from their harness and clipping them into the bolts in the wall. They then clip the rope into the quickdraws.

The best way is to have a go, you may think these activities don't have a place, but I believe that there cannot be enough practice of our core safety skills. Most accidents are 'climber error' – best to see it is not you, or one of your students. ■



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Guiding Albhida (Gubia Normal) Mallorca. © Alan Halewood.

LEADING TWO CLIENTS ON TWO ROPES

I was fortunate to spend much of my working life in the west of Scotland and quite a lot of time taking clients up relatively long routes year-round in a mountain setting. What follows may be of interest to others doing similar work.

WORDS BY SIMON POWELL

Here, I am principally thinking about taking two relatively experienced clients up a route using two single ropes, generally keeping them parallel! I chose this system based on my experience over an extended period of time in a particular environment. It is much more of a 'guiding' system than an 'instructional one', on reasonably straightforward routes where I was happy to lead on one rope. Although it was my default system for this type of expedition, I should reiterate that there are pitches and situations where climbing in series is preferable.

For me, the secret of getting home in time for tea was efficiency, from which came speed. It was important to give the clients as much time as possible to do their climbing without having to try and rush them. After all, them doing the climbing was why we were there in the first place.

Usually I would be on a route I knew well, meaning I could move fast and get the leading of a pitch and the establishment of the next belay done quickly, enabling the clients to get moving again as soon as possible.

Very early on I adopted using direct belays for just about everything except snow belays, which I avoided as much as possible. **N.B. for direct belaying a bombproof anchor is imperative** and a high attachment point very useful. Initially I used an Italian hitch for each rope with the two HMS karabiners linked in series. Life became much easier when the 'magic plate' (or 'New Alp', or

'plaquette') came along, although the almost impossible option to lower a client had to be carefully considered.

Life improved when I was introduced to the Kong GI-GI; its smoother action (due to the rear rib 'fulcrum') and the hole at the bottom of the plate meant that there was now a leverage point opening up the possibility of lowering if required. I appreciate there are other devices available now, and to avoid any confusion, whatever model you use, I'm going to use the term 'guide plate'. I hear that some people still prefer the GI-GI for its speed and versatility as the one plate handles ropes between 8mm and 12mm, but do be aware of which way around works best, as the rib is only on one side!

I also soon learned that having ropes slightly longer than the standard 50 metres could be very useful. It could mean longer pitches, resulting in fewer belays and faster ascents. Overtaking other parties could be easier too. I graduated on to 55 metres, then 60 metres, and occasionally even longer. Newer skinnier but still single ropes were a boon for handling and are lighter weight, although abrasion could be a problem. Escaping and descending could be faster too. That said, the longer the ropes, the more potential for knitting if mismanaged.

I know that ideally, we should always be able to see our clients, or at least communicate with them when they are following a pitch. However, on a long mountain route that just isn't possible without making pitches impractically short. In any case, wind and snow can



1. Kong GI-GI in use (left) and Original New Alp in use (right). © Simon Powell.
2. My hoist kit: Shunt and pulley haul – lighter gadgets are now available! © Simon Powell.

often make hearing and sometimes seeing each other impossible – so I plan for it and work with it, training my clients beforehand under my watchful gaze. Once I'm satisfied that they can do things safely and unsupervised, we're off!

I climb towing two ropes behind me, one to each client. I lead on one of them, and this 'lead rope' is tied conventionally in to my harness, with one client belaying me on it. The other rope is tied in to my harness abseil loop; this rope is referred to as the 'signal rope'. The other non-belaying client can help the belaying client with rope management, while also having time to eat and drink something if needed. Clients can take turns to belay at alternate stances giving the other client time to eat etc.

Having each rope tied in to my harness differently means I'm less likely to confuse which rope is which! BUT, if you want the option of being belayed on both ropes, tie both in correctly but perhaps use a different knot from your usual one for the signal rope; just be aware that runners on the signal rope will limit its effectiveness for signalling!

As I lead, I place runners on the lead rope. If the signal rope needs directing to keep that rope above its client, then it too is attached to the runner with an extra karabiner.

Once I'm established and ready at the next belay, I pull in the remaining signal rope, put it into the guide plate and check it. I then give four big distinct pulls on the signal rope. This means "The leader is safe; take the lead rope out of the belay plate". I wait 20 or so seconds, then start pulling in the lead rope. Once that is all in, that too goes in to the guide plate, the karabiners are screwed up and everything is re-checked. Now I give a similar four big distinct pulls on the lead rope. This means "The leader has you both on belay, you can commence climbing". Now all I have to do is monitor each rope, keep the ropes coming in, and enjoy the view.

The decision of which client you have on which rope can be an important one. If there is a better/faster client (at climbing, ropework, removing gear) then they come up last on the lead rope with more jobs to do, giving the less able client more time to just get on with the climbing.

So now the signal rope client starts climbing, and the lead rope client can start taking the belay apart and getting ready to climb.

The client on the signal rope should understand:

- Only climb when the rope in front of you keeps getting taken in and is gently tight most of the time; if it stops then you stop and

do not let slack rope build up in front of you.

- When you get to a runner that your rope is also clipped in to, un-clip **only your rope** and continue climbing.
- When you get to a runner that your rope is not clipped in to, by all means remove it and bring it with you if you have time, but otherwise, especially if the last client is close behind you, just ignore it and keep climbing.
- Never go under the other client's rope (or the instruction might be "never go over", it depends on the nature of the route). This avoids ropes getting twisted around each other.
- Be especially careful not to drop anything or kick anything off as someone is close behind you.

The client on the lead rope client should understand:

- Only climb when the rope in front of you keeps getting taken in and is gently tight most of the time; if it stops then you stop and **do not let slack rope build up in front of you.**
- Don't get too close to the other client in front of you, as if they fall, their rope might stretch enough to let them hit you.
- Stop in places where you can easily rest. Don't start up something steep until the client above you has passed it; you don't want to find yourself having to stop and wait on steep ground where you might quickly tire.
- Remove all the gear and bring it with you.

The last but one little tip – if you want to give a client a very tight rope/bit of a pull over something, just put a friction device on the live rope, put the dead rope through it, and pull (see image). In such cases the Petzl Microtraction certainly justifies the extra few ounces.

The last little tip – in addition to different coloured ropes, I try to have one with a colour of one syllable e.g. red (lead rope), and one with a colour of two syllables e.g. yellow (signal rope). It sometimes helps when trying to communicate on a windy day!

I'd like to thank Alan Halewood (mountaineering Instructor Certificate holder). for his valuable feedback and contributions to this piece. Alan is based in Scotland and can be found at www.climbwhenyoureedy.com ■



Simon Powell spent over 30 years in the 'glorious game', from an 18 year old apprentice at Plas y Brenin to directing a national centre. He gained his Mountaineering Instructor Certificate at the age of 25, ran his own mountaineering company and founded the AMI.

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series of packs have been developed specifically for climbers and mountaineers needing the very best in simple, functional design. Excelling on rock, ice and mixed ground, they provide uncompromising functionality for alpinism's leading edge.



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PHOTO Vertical hoist in a paragliding harness straight from a wheelchair.

Disability is a hugely complex subject and increasing your understanding is especially important for planning activities. Greater knowledge of different types of disability and good communication with the individuals will ensure a better quality, safer, more inclusive session.

CLIMBING FOR ALL

INCREASING DISABILITY AWARENESS IN THE OUTDOORS

It's a good idea to begin with developing your knowledge of types of disability and how discriminatory behaviour has evolved and been tackled. Discussion about appropriate and inappropriate language can raise interesting responses and sometimes none, because people are afraid to say anything! An example is *handicapped* which originates from *cap in hand* (begging) because a disabled person was considered unable to earn. Fortunately nowadays terms like these are heard far less but people still regularly use words such as *special*, *disorder* and *suffering* to refer to disabled people. The question raised here is: are these words forming a judgement?

A more complex area is the different models of disability which play a key role in forming attitudes, relationships, policy and law. The two main models are medical and social. The medical model argues that a person's disability is a result of their own condition. It is the role of the disabled person to change or adapt to the environment. Change can come through medical alterations, for example genetic modification or a prosthetic limb. The social model was introduced to challenge this and to look more closely at how, through lack of consideration, society was creating disability. Examples include stepped access to buildings which are not wheelchair accessible or marketing

material not being legible to blind people because of size or colour of text.

WORDS AND PHOTOS BY GRAEME HILL

As equality develops, new theories evolve with a much greater emphasis on looking at individual needs rather than grouping people under one broad term; however it is still important for us to understand from the start the role we have played in affecting opportunities.

An excellent new set of guidelines has been developed by The Activity Alliance (formerly EFDS) called *Talk to me: 10 principles* and there is a great short video to accompany this (link at the end of the article). As the title implies this is about talking to people. For example, a discussion with a wheelchair user might allow you to find out whether they have any standing or walking ability which you might never know about if you hadn't started the conversation. The guidelines identify ten key areas which provide very clear pointers to explore. For example, **My Locality**; are you delivering your activity in an area that is accessible for disabled people and close to where they live? Think about costs, parking, bus routes? **Me, not my impairment**; don't focus on a person's disability or assume that they identify as being disabled. Focus on the individual and what they can achieve and think about how your marketing is targeted. **Reassure me**;



1



3



2

1. Attaching the vertical hoist to the paragliding harness. 2. Theory session. 3. Vertical hoist.



Graeme Hill is a provider of the

Climbing for All course and is the secretary of Adventure for All. His full-time job is Inclusion Programme Manager for Link4Life Leisure Trust which involves developing accessible sports and physical activities for people of all ages and abilities. He holds the Mountaineering Instructor Award so in addition to providing courses also provides technical advice and consultation on improving access.

He also sits on the BMC Equity Steering Group and was the founder of the GB paraclimbing team. Climbing for All is a course that aims to increase the knowledge of climbing instructors in the subject of disability with a view to increasing access to the outdoors. Climbing for All is a one-day course recognised as CPD and can be found on the workshop programme.

The course can also be bought into your facility. If you can't find a suitable date or venue, please get in touch with Adventure for All.

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make people feel welcome. Many disabled people fear they will stand out when attending an activity.

If you want to run inclusive practical sessions, understanding the role of the climbing environment itself is crucial as it will have an impact on your options for adapting the session. It's important to remember that even if a wall isn't fully accessible, sections of it may be. Think about route grading/setting, lighting, space and noise. Very often wall managers will be perfectly happy to add holds to routes, turn down the music or give you dates they are not route setting to avoid noise of drills etc. Whatever the situation, just be clear and honest with your participants.

There are various techniques that can be employed to allow some disabled people to achieve in a climbing wall, including side supported climbing, vertical hoists and wheelchair abseiling. Side supported climbing involves climbing alongside a person, either to give them confidence or to assist them in getting up the climb. There are a few different ways to manage this depending on the needs of the individual and it is also worth considering who is the best person to climb alongside; it may be that you, a teacher or an assistant is most suitable.

Vertical Hoists are systems set up primarily to enable wheelchair users to climb but have also been developed into other activities such as swings or spins which provide an excellent sensory experience. Vertical hoists tend to use full supporting systems such as a paragliding harness and are run through pulley systems to assist ascending. Learning to be confident with moving and assisting a person who does not have the physical ability to do

it independently will result in a more positive experience for you and the participants.

Abseiling is an activity which, when adapted appropriately, can be enjoyed by wheelchair users who often like to abseil in their own chair. Places such as Bendrigg Trust and Calvert Trust have dedicated wheelchair abseil areas. Setting up a wheelchair abseil system requires specific training on how to secure the wheelchair and ensure that the wheelchair user is safe. The techniques required for both vertical hoists and wheelchair abseiling are complex and should not be attempted without appropriate training and technical advisor approval.

A question very often asked is how much it costs to run inclusive activities, particularly vertical hoists and wheelchair abseiling. These days many of the items of kit used such as a Petzl Rig, Spreader Plates and Pulley Wheels are already owned by many providers. The costliest bit of kit is the harness but through developments and work with manufacturers these are now available at just over £200. The most expensive aspect of running inclusive activities can be the extra staff sometimes required to deliver them. With a bit of lateral thinking this can be tackled by working with individuals or disability organisations to apply for funding that is not necessarily climbing specific but around themes such as tackling isolation, improving health & wellbeing, increasing activity opportunities for disabled people. It is then the role of the climbing instructor to sell the benefits of climbing and be part of that offer.

<https://www.youtube.com/watch?v=wp-CF8IhqUU> ■



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DEGLACIATION

WHEN THE PLANTS MOVE IN

We live in a time of great change regarding world climate. The retreat of the world's ice caps and glaciers continues, exposing new surfaces once covered beneath vast frozen rivers of ice.

WORDS AND PHOTOS BY JIM LANGLEY

With the unearthing of these rocky surfaces, comprising of glacially scoured bedrock, boulders and gravels, comes an opportunity for new life to colonise these virgin habitats.

With only a meagre source of minerals and nutrients, pioneer lichens and mosses are able to establish and grow in the exposed and barren landscape with their spores being blown in by the wind. Shortly after specialist plants take root and begin the establishment of the early pioneering community of plants. In such extreme conditions growth is slow, but conditions steadily improve and pockets of soil develop as dead plant materials are broken down, decompose and become available for new plants to utilise the nutrients.

This transformation continues over time with new additions to the plant community. With each addition the conditions in the soil develop and the habitat gradually changes. Each alteration to the environment changes the conditions enough to make it more favourable for different species that take advantage of this new opportunity and the diversity of species rises. Over time this process of development stabilises and the sequence of plant communities comes to rest with characteristic plants that define the ecosystem.

What has been described above is the process known as 'primary succession'. This is a large-scale pattern and follows the changes in plant communities and the development of soil which occur

over time. The final plant community is recognised as the typical vegetation of the area which is largely defined by climate. We notice this as we observe the changes from the milder valleys to the tops of the higher mountains where distinct bands of vegetation occur. Each of these bands of vegetation are characteristic of the altitudinal zones and reflect the natural vegetation of that climate.

Succession is tightly bound to the underlying substrate and the early pioneer species vary according to the nature of this. The substrate and terrain can be wet or dry, exposed or sheltered and the habitat may be solid rock, boulders, gravels or finely ground clay. The plants most suited to the specific conditions of that habitat become established first and begin the process. Interestingly, regardless of the nature of the initial habitat, the final, stable 'climax' community will always be the same for that climate and location.

In the Alps there are many examples where primary succession can be seen. The first to colonise, following mosses and lichens, are a community dominated by plants such as Fleischer's Willowherb, Alpine Toadflax and Yellow Mountain Saxifrage. These plants dominate large areas of the glacial foreland where there are glacial outwash gravels. Other pioneer communities are also observed in wetter areas where Cottongrass, various sedges and ferns can be found. Rocky and bouldery habitats are often colonised by



MAIN PHOTO Vegetation colonising the glacial outwash gravels below the retreating Glacier de Pré de Bar, Val Ferret, Courmayeur. © Paul Hearn. 1. Netted willow. 2. Mountain sorrel is a short-lived early coloniser. 3. Green Alder is able to improve soil by adding nitrogen via bacteria in its roots. 4. Fleischer's Willowherb is an early pioneering plant in glacial outwash gravels. 5. Lichens are amongst the first settlers to newly exposed rocky sites. 6. Arolla pine forms a climatic climax community. 7. Cottongrass is a pioneering plant in wetter areas such as here at Val Lauson in Gran Paradiso National Park.

Houseleeks and Adenostyles.

Mountain Sorrel is also an early pioneer species but is a short-lived plant and soon Green Alder and Willow out-compete this and the other small, slow growing pioneer plants. Over time the Green Alder scrub is taken over as the conditions improve and allows the dwarf shrub community to establish, dominated by Alpenrose, Bilberry and Juniper. Eventually the transformation of the ecosystem allows for the formation of the Larch-Arolla Pine forest, climax community.

The importance of soil development is often overlooked but there are many significant changes that occur as the skeletal, mineral soils eventually develop into an organised, deep and organic-rich cover with many distinct layers. Over time nitrogen is added to the soil through the action of nitrogen-fixing plants such as Mountain Avens and Green Alder. Mycorrhizal fungi, associated with the roots of certain plants such as Spring Heath and grasses, help to accelerate

the development of the soil by accessing nutrients and making them available to the plants in exchange for sugars produced by the plants. The organic matter eventually increases and the soil begins to form a continuous ground cover and bacteria and tiny organisms continue to transform leaf litter into soil. Some processes in the soil can take over a thousand years to fully form which neatly illustrates the significance of time in the process of ecological succession. ■



Jim Langley holds the International Mountain Leader qualification and lives in North Wales. He runs the company Nature's Work, developing learning and understanding about the natural world through a range of training courses. Jim also provides CPD workshops across the UK and in the Alps on the environment and alpine flowers. www.natureswork.co.uk

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WALKING WITH WEEDS

WORDS AND PHOTOS BY DR JADE PHILLIPS

“A common man marvels at uncommon things: a wise man marvels at the commonplace.”

Confucius

Plants are common. There are over 350,000 plant species and we rely on about a dozen for our food. Some of the most common species include the grasses and clovers that give the UK its nice green carpet. These species are also some of the most important plants for our food security. Sure, you won't find the shelves of supermarkets filled with grass or clover, but you will find our cows and sheep eating it.

All of our food, and our animal's food, originally came from wild plants.

These have been progressively tamed by scientists and farmers to produce the fields of wheat and barley that we're used to seeing across the countryside.

However, many of our crops now have limited genetic diversity due to being domesticated. Therefore, when things get a bit too extreme in those fields, in this intense heatwave and drought (June-July 2018) for example, our crops are ill-equipped to deal with such extremes (much like those DofE groups who don't take their waterproofs because it is sunny when they start walking). That is where wild species, known in science circles as crop wild relatives, come into play.

Now you don't need to be a botanist to be able to find these species. Stepping out of my van at Pen-Y-Pass (well, the layby further down the road, as we all know how hard it is to get a space there), I stepped straight on top of some white clover (*Trifolium repens* L.). I didn't even need to leave the car park to find this globally important species.

So why are they so important? Let's look a bit more closely at clover. Clover is an important forage species for farmers to feed their cattle and sheep. The plants provide protein for animals and are good for the soil as they have nitrogen fixing fungi on their roots. The species originated from southern Europe but is now one of the most widely distributed plants in the world. Populations

are found from the hot, dry environments of the Mediterranean to the cold, wet conditions of the arctic. It is the populations growing in unusual habitats that are the most important for our farmers and plant breeders as they may contain useful traits that we may require in cultivated species to help adapt them to new environmental conditions, such as drought tolerance.

This is why the mountains are such a hotspot for our wild crops. Mountains have a range of habitats and environmental zones which creates great variation in a plant's genetics. Agriculture actually has its humble beginnings in the mountains of the Near East and the Caucasus. These areas still contain the most important wild populations of crops such as wheat, barley and oat. Further afield in the Himalayas you can find rice, chickpea and apple and in the Andes wild corn, peanut and potatoes in all shapes, sizes and colours.

Back to our local hills, unfortunately I am yet to find a wild purple potato, but I can still see Cocksfoot (*Dactylis glomerata* L.), which is cultivated as a high yielding hay grass. Ryegrass (*Lolium perenne* L.) is easily recognisable and is widely used as a forage grass for livestock. Common bent (*Agrostis* L.) is a valuable forage for animals and is also used as a recreational grass on golf courses. You are also likely to see wild oat (*Avena* L.) and wild barley (*Hordeum* L.) which are common along footpaths and disturbed ground. Populations of the above species can be found growing in unusual locations, for example, those populations growing along the edge of Llyn Padarn. They aren't growing in normal soil, in fact it is quite dry, but their adaptations may be useful to farmers who want to grow cultivated versions which are adapted to growing in poor soil conditions.

Of course, not all wild relatives are grass species. Some other common plants found in the UK include wild onion species (*Allium* L.), wild strawberry (*Fragaria* L.) and wild asparagus



Dr Jade Phillips is an MTA member, Climbing Wall Instructor and Mountain Leader trainee. She has a PhD from the University of Birmingham in conservation of plant genetics and food security. She is most likely found climbing, running and foraging around the hills both here and abroad. She would like to thank her friend for the Alpine flora book "I'll make use of it for sure". In the internet world you can find her [@jadephill10](#).



MAIN PHOTO Grass silhouette with Moel Siabod. 1. Cocksfoot [*Dactylis glomerata*] in flower and growing in Snowdonia. 2. Ryegrass [*Lolium perenne*] flowering next to Llyn Padarn, Snowdonia. 3. Spot the bee having some lunch. White clover [*Trifolium repens*], Llyn Padarn, Llanberis. 4. White clover [*Trifolium repens*] growing at the side of the Miners track, Snowdon. 5. Wild strawberry [*Fragaria vesca*] growing in amongst the slate, Llanberis, Snowdonia.

(*Asparagus* L.) which are found across our crags and mountains. Sea cliff crags are a great location for crop wild relatives, the Lizard Peninsular is one of the top locations in the UK with the highest number of crop wild relatives (Fielder et al., 2015). Here you can find wild sea carrot (*Daucus carota* subsp. *gummifer* (Syme) Hook. f.), sea radish (*Raphanus raphanistrum* subsp. *maritimus* (Sm.) Thell.) and sea beet (*Beta vulgaris* subsp. *maritima* (L.) Arcang.). The Gower and Pembrokeshire are also hot spots for our wild relatives.

The genes contained within populations of these wild species could be the key to adapting our agriculture to withstand climate change. If we find, conserve and use these populations, via conservation of seeds and within protected areas, we can help

protect future food security. Yes, these plants are common, but they are important and by putting a story to these familiar species we can help to engage people with their environment even more (that number one lesson you learn when doing any mountain training course). So, when you next walk past a patch of grass, take a closer look and become a little wiser.

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Fielder H, Brotherton P, Hosking J, Hopkins JJ, Ford-Lloyd B, Maxted N (2015) Enhancing the Conservation of Crop Wild Relatives in England. PLoS ONE 10(6): e0130804. <https://doi.org/10.1371/journal.pone.0130804>

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WORDS AND PHOTOS BY ARTHUR JONES

OUR MISSING TREES

Woodland is not what we normally expect to see when setting off up a hill, but at one time a tree covered hillside would have been a common sight – one which has been lost over the millennia and to which we have become accustomed.



1. One of our typical hillsides – devoid of trees or lush vegetation. 2. A Norwegian hillside showing how our hills could [should?] look. 3. Fenced enclosures will help trees to become established. 4. Scots Pine woodland should be a much more common site.

At the end of the last ice age, 12,000 years or so ago, our hills would have been bare rock and gravel, scarred by glaciers and with huge piles of stony debris heaped up in moraines – any plant life would have been minimal. Then as the ice retreated and the climate warmed, mosses and ferns would have gradually spread in from warmer climes in the south, followed eventually by pioneering species of tree such as birch, juniper and willow.

Birch is a particularly effective pioneer species as it grows in poor unpromising conditions due to the fact that it forms associations with fungi which extract nutrients from stony ground much more effectively than the tree's own root system. Hence birch will thrive where other species would wither and die. Once mature, the tree drops copious quantities of leaves which have a light structure and hence rot down easily, thus creating its own compost to start the process of making soil. A further important characteristic is that, like peas and beans, birch fixes nitrogen in its roots, further sweetening the ground. Thus once a crop of birches has established itself and grown to maturity, the ground is richer and more able to support more demanding species. Lastly birch spreads quickly and easily. A mature birch can produce up to an amazing 250,000 windblown seeds which then create another generation of trees just downwind of its parent, particularly if the ground is devoid of other vegetation. Have a look next time you are passing an area where the ground has been disturbed near to mature birch and you will often see a thicket of young trees sprouting.

This colonisation by birch and willow, followed by species like

alder and hazel continued and by around 8 or 9000 years ago we had extensive tree cover over the entire country, hills included, though perhaps not exactly as we think of woodland today. The lower slopes probably bore a resemblance to African savannah today as it would have benefitted from natural thinning and pruning caused by grazing animals such as deer or auroch (wild cattle). In turn the areas where these beasts grazed would have been controlled by the need for them to feed only where they could keep a good lookout for predators such as wolves, so that the places where predators could lurk would have been left ungrazed, leaving a mosaic of thickets and open glades. On the higher slopes there would still have been trees, but with increasing altitude they would have become progressively more scrubby and stunted till on the tops they would only have grown to a height of a couple of feet – if that. It would have looked more like low bushland than woodland. It is estimated that Britain was about 90% covered with trees at this time.

Then man arrived. Wood is a versatile and useful material for a range of purposes – as a building material, for making tools, weapons and domestic utensils, and of course for firewood. So trees were exploited to provide material for all of these functions. In addition, man eventually gave up the nomadic life of hunting and gathering and started to farm. For this he needed open fields and gradually remaining areas of woodland were cleared for growing crops.

Around 5000 to 6000 years ago, the climate cooled and weather conditions deteriorated, making it harder for all sorts of vegetation to grow. Peat started to form where once there had been stands of trees,

the remains of which are the bog wood whose skeletal remains can be seen poking out of peat hags today – or at least those which have not so far been scavenged for fuelling the bothy fire.

As time went by, population continued to increase and the demands for timber did likewise. By the middle ages ships were being built to equip national navies, houses had become bigger, more elaborate and more numerous – and so the need for timber exploded. Charcoal was needed for smelting iron ore and that need increased as the demand for metal products grew. To process their iron ore, the 18th century ironmasters needed large quantities of charcoal, which in turn was dependent on the availability of huge acreages of timber. Having denuded their own locality of trees, it was much easier for the iron masters to then ship their ore to places where there was still plenty of mature woodland and so iron foundries were established in apparently remote places such as Bonawe – and the surrounding hillsides were also stripped bare of trees.

Then of course there was over-grazing. Both sheep farming and deer stalking have been part of the rural economy over the years and where flock or herd numbers have been kept high to maximise returns, the ground vegetation, young tree saplings included, has suffered. There have always been grazing animals on our hills, and always should be, but if grazing is unchecked and uncontrolled we end up with what has lately been described as ‘green desert’ with not a tree or shrub in sight. Look at areas of hillside which have been fenced to keep sheep or deer out and you will see a massive difference on the two sides of the boundary. Or look into gullies or on crags which are too steep for animal access and again you will find trees growing – indicating how prolifically they could have grown over the entire hillside had they not been eaten as saplings.

These processes have gone on till modern times and by the time that World War 1 had ended, we were left with only about 5% woodland cover. That is when the government realised that we had lost an important resource – in times of emergency we could not rely on imported timber for construction or for pit props in the coal mines to produce the raw energy needed to sustain an industrialised country. And so the Forestry Commission was created to try to make good the deficit, and in an attempt to do this within a reasonable time frame, fast growing, non-native conifers such as Sitka Spruce were planted in areas where slower growing native trees had once flourished. Although these big, unsightly plantations have created much adverse comment over the years, the Forestry Commission were only doing what had been asked of them and in more recent times they have been trying to make their plantations more diverse and to blend in with the natural contours of the hillsides on which they are planted.

We have now about 17% woodland cover in Britain and the aim is to increase it to around 25%. It is worth noting that this refers to woodland cover – and so includes areas of native woodland rather than purely commercial plantations. Amongst the general public there has also been an increasing awareness of what has been lost and in recent years, a wide range of projects have been established to try to bring back our native trees in something resembling the natural woodlands which have been lost. Some of these projects are run by national bodies, others by local groups or individuals, some are on the hills others on lower ground, but all are helping to bring back some of the rich diversity which we have lost.

In the next article I will describe a few of those tree species you are most likely to encounter while on the hill and give you a few facts about them. ■



Arthur Jones is a Mountain Leader and member of MTA. He has operated as Trossachs Treks for the last 10 years or so and specialises in trying to interest and enthuse clients about the wildlife, especially plants, which they encounter while out on the hill. Guide for outdoor enthusiasts.



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TOP Dunlin in summer plumage. © BTO/John W Proudlock. BOTTOM Dunlin in winter plumage. © BTO/John Harding.

DUNLIN

Two birds for the price of one? You would be forgiven for thinking that the dapper wee bird with its reddish, almost tortoise-shell cap and back, streaked chest and large black patch on its white belly was a different species to the one with the delicate, dare I say dull, grey upperparts and chest and white belly. Early ornithologists certainly did, naming them the summer dunlin and the winter dunlin. They are in fact the same species, albeit different subspecies, wearing summer and winter plumage.

High on the moors of the Pennines or the Scottish Highlands you may encounter this wee bird in the summer apparently stalking larger waders, such as golden plover, breeding in the same area. The larger golden plover rises up calling, swiftly followed by one or more dunlin calling in response. This behaviour is reflected in some of the common names for dunlin. In parts of Scotland it was known as the Plover's Page and the Icelandic name translates to 'the plover's slave'. Somewhat more emancipated, the Gaelic name *Gille-feadag* translates as 'boy or attendant who whistles'.

On coastal walks in winter you may see flocks of hundreds or thousands of dunlin feeding on mudflats. They scurry about like busy mice rapidly probing the mud, 'stitching' like hundreds of tiny sewing machines. This behaviour has earned them the local names of Sea Mouse and Sand Mouse. These birds won't be the same as those you saw on our moors though since they winter in West Africa. The birds you see in winter breed in western Siberia.

The fourteenth in a series of articles on birds.

WORDS BY SUE HAYSOM

- Q What can *you* do for dunlin?
- A Recognise, celebrate and record them via *BirdTrack* (for information see the BTO website www.bto.org).
- Q What can dunlin do for *you*?
- A Illustrate the connections between seemingly separate habitats and places. ■

Vital Statistics

Length: 18cm

Wing-span: 40cm

Weight: 48g

Habitat: Summer – tundra, moor, heath; Winter – estuaries and coasts.

Food: Invertebrates, chiefly insects when on breeding grounds.

Voice: Slurred 'treer' or 'treep' often, but not always, repeated.

Courting trill: regularly repeated harsh frog-like wheezes.



Sue Haysom is a Professional Ecologist, Mountain Leader and member of MTA, Sue is the owner of Greyhen Adventures.

Personal Accident Insurance

As a working professional your focus may well be on ensuring that you have adequate public liability insurance and professional indemnity cover, so it's possible to overlook personal accident insurance or perhaps assume that it is part of the package.

Mountaineering council members

Individual members of the BMC have an element of personal accident cover as part of their membership; this does not apply to club members unless they pay an upgrade fee. Individual or club members of Mountaineering Ireland get an element of personal accident cover as part of their membership. No personal accident insurance is included with membership of Mountaineering Scotland. Personal accident insurance through the mountaineering councils **does not cover paid work.**

Both Lockton, which provides cover for MTA, AMI and BAIML members and Doodson, which provides cover for BMG members, offer those who have taken out their public liability insurance the option to purchase personal accident cover which will cover you during paid work.

What it can cover

Personal accident insurance provides coverage for individuals, families or larger groups for either a 24/7 period and/or whilst at work. It can be provided in two different ways, as a stand-alone policy or as a benefit included within another insurance product. The policy will typically compensate the policyholder and/or their family in the case of Accidental Death, Loss of Limbs/Sight/Hearing, Permanent Total Disability (PTD) and Temporary Total Disability (TTD).

Policies vary from one to another but generally, Accidental Death means a sudden, unexpected, unusual, external, specific event which occurs at an identifiable time and place during the period of insurance.

A Loss of Limb generally means permanent loss by physical separation of a hand at or above the wrist or of a foot at or above the ankle and includes permanent total and irrecoverable loss of the use of a hand, arm or leg. Loss of Sight and Loss of Hearing in one eye or ear respectively can also be covered.

Permanent Total Disability protects the policy holder against a career ending illness or injury, by payment of a lump sum agreed when the policy is purchased. The disablement would be required to last for longer than a defined period (e.g., 12 months) and at the end of that period is beyond hope of improvement.

In addition coverage can also include Temporary Total Disability (TTD) which means a disablement that entirely prevents the Insured Person from attending to their business or occupation, with the cover providing a benefit of weekly or monthly payments designed to replace lost income if the insured person suffers an injury or illness which prevents them from engaging in their usual business or occupation. Again, these limits would be set when purchasing the policy.

Medical expenses

A personal accident policy can also provide cover for medical expenses if these are required following an incident. The costs will be reimbursed by insurers for covered medical expenses arising from a sickness or injury. It can cover both inpatient and outpatient expenses, with a small excess usually applicable.

Cover can also extend to include emergency evacuation and repatriation, which is designed to ensure that you have access to suitable qualified medical facilities in the event of injury or illness whilst in a region where local treatment is inadequate or unavailable. Reasonable travel expenses will be covered for repatriation or

evacuation for the covered person to the country of domicile.

Funeral expenses are another element of personal accident cover that is usually included. Cover would be included for reasonable costs of funeral provision and expenses reasonably incurred following an insured person's death arising directly from accidental bodily injury.

Claims Examples

Scenario One: An individual is climbing a rock face, they fall and subsequently as a result of their injuries they pass away. The *accidental death* policy will pay a lump sum amount to the beneficiary listed on the policy, for example a spouse, children and/or other family members.

Scenario Two: An individual suffers a fall on a mountain range in the French Alps, hitting their head and falling into a coma. Immediate medical treatment is required and the individual remains in hospital for a month in France before gaining consciousness. Medical expenses up to the policy limit would cover any treatment required. Due to the fall the individual is unable to work for 6 months. If a personal accident policy is in place and cover is included for Total Temporary Disablement the individual would receive a weekly or monthly benefit to replace their lost income. The sum would have been agreed at the time of purchasing the policy and a small waiting period would apply before being able to claim.

Levels of benefit under a policy, definitions of the key terms and areas of cover and exclusions vary from policy to policy, so it is important to fully review the coverage to ensure it will meet your needs.

Exclusions

Winter sports may be excluded from a policy or added for a higher premium. All activities being carried out need to be declared when purchasing the insurance so that the underwriters can price the risk accordingly. Activities not declared wouldn't be covered as this a change in material risk. Insurers may exclude some activities which they deem too high risk but this would be looked at on a case by case basis.

The insurer is unlikely to pay out in the event of deliberate exposure to exceptional danger (except in an attempt to save human life), or the policyholder's own criminal act, or if the policyholder was intoxicated by alcohol or drugs.

Claiming against the policy

In the event of an accident the insurer will rely on being contacted either by the policyholder or their next of kin in order to initiate a claim. For this reason it is important that you notify your next of kin about any policies you may have. ■



Jack Matthews works for Lockton Insurance brokers based in London within the Accident, Health, Sports and Contingency team. Jack has worked in insurance for over seven years beginning his career as an underwriter and then moving over to the broking side. He studied History at undergraduate level and then for a masters in International Development at the University of Manchester.





Hyponatraemia in sport

[Exercise-Associated Hyponatraemia]

“London marathon runner”
– the headlines read – **“left fighting for
her life after drinking too much water ...”**

WORDS AND PHOTOS BY WILL LEGON

What is it?

Hyponatraemia simply put is having low salt levels. At any one time our body's salt and sugar levels vary according to what we're doing and what we're consuming – and according to how well or ill we might be.

For the outdoors enthusiast there may come a time when we drink so much fluid that our sodium (salt) levels become overly diluted or we drink so much fluid that we essentially sweat out our salt to the point that we go into hyponatraemia.

If you ask a medic what causes this condition the first thing they'll probably tell you is that it is very often a side-effect of one drug or another. But for the

casualty who is otherwise fit and healthy and enjoying the outdoors this is unlikely to be the reason.

For the outdoors enthusiast/endurance athlete, the context is likely to be that of a hot day with a casualty who has very diligently been drinking a lot of water. Hyponatraemia can also occur in a casualty who is on expedition in a foreign environment and is dehydrated due to diarrhoea.

What does it look like? What do we see?

When our sodium levels are too low or too highly diluted, the cells in our brains swell up. In turn the casualty experiences symptoms that are associated with cerebral oedema (i.e. compression on the brain). When the brain is affected in this way the symptoms gradually manifest themselves in the casualty's behaviour. Confusion, clumsiness, nausea and vomiting may all be seen. Initially though,



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MIKE PESCOD ON MINUS TWO GULLY ON BEN NEVIS



MAIN PHOTO Long day, Welsh 3000s Challenge. LEFT Essential hydration on a hot day, Welsh 3000s Challenge, June 2018. RIGHT Tiredness setting in on the summit.



nothing may be seen though the casualty will have at the very least, begun not feeling quite right.

In its later stages as the brain continues to be squeezed by this excess in fluid, things for the casualty get worse. Seizures, respiratory arrest and pulmonary oedema may all follow – all of which can have fatal outcomes.

How can it be prevented?

The answer here is not to stop or discourage people from drinking freely. When organising any endurance event I personally factor this into my risk assessment.

If I know the weather is going to be hot and that people will rightly want to drink lots of fluids I try and encourage them to eat a balanced diet including savoury products as well as the usual array of sugary, high energy snacks.

If food is provided, salt is added. As well as offering people sugary drinks I will offer them bags of crisps for example.

What can we do about it as a first aider?

As a first aider you will not diagnose hyponatraemia. In fact, out of the hospital environment, in its early stages, even a medic wouldn't necessarily make a diagnosis, and besides, it's way beyond the remit of a first aider to be making diagnoses anyway.

Leaders working with clients on endurance events or on expedition need to be aware of people not feeling well. First things first, whatever the casualty is doing, stop them from continuing. Listen to what the casualty tells you. It could well be that they're not hungry or maybe not hungry for sugary snacks. Might they be tempted to eat something salty? If you have any (and on a trek or on expedition I carry plenty), offer the casualty oral rehydration salts or electrolytes

such as *Dioralyte* sachets. Make sure that you dissolve the powder in the prescribed ratio since we're aiming to offer the casualty the right concentration of salts to fluids.

If the casualty's condition begins to get worse seek further advice by calling 999 (if you're in the UK) and talking through what you're facing with a member of the local Mountain Rescue team. Just because you call 999 doesn't mean that you're hitting the panic button and everyone will now be heading in your direction. The emergency services would far rather talk you through a problem if it can save things from escalating.

If the casualty is becoming confused, lie them down on their side in a safe airway position and treat them as an unconscious casualty (they can't fall off the floor). If the casualty tells you they are struggling to breathe lying down, let them sit up right. Monitor the casualty and keep the emergency services updated with any changes or deterioration. If the casualty has a seizure, protect the head as best as possible and time the duration for which it happens. If the casualty stops breathing be prepared to commence CPR.

Summary

A quick internet search and I see that since the London marathon's first event in 1981, one person has only ever died from this condition. It is not common, and people shouldn't drink less than they feel that they need to drink. Eating a balanced diet during an event with sweet and savoury food, and drinking plenty of fluids is still important. ■



Will Legon is an MTA member and founded and runs Will4Adventure. In a former life Will was a Territorial Army officer and school teacher; now he considers himself to be a 'Blessed Man', working professionally as a Mountain Leader and Rock Climbing Instructor, taking people walking and climbing for a living and running outdoor and expedition first aid courses.

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Second in this series of examining readers' questions about leadership is a focus on what to do when your normal job role seems to limit opportunities to demonstrate the INSPIRE leadership behaviours.

THE LEADERSHIP CLINIC

WORDS BY DR SAMANTHA McELLIGOTT

Following the leadership CPD workshops, there have been numerous discussions about what to do if your everyday job role does not seem to lend itself to some of the INSPIRE behaviours.

For some practitioners, time constraints limit their capacity to demonstrate the behaviours (as examined in the previous edition), for others, it would appear that they do not see a place for certain behaviours in their typical work. For example, many practitioners find the behaviour of 'Praise, and give constructive feedback to help your followers develop' very difficult to demonstrate when working with paying adult clients. The problem seems to be that 'praise' is often seen as patronising. Practitioners feel uncomfortable using praise, saying that they find it comes across as disingenuous, and awkward.

Let's say, for example, that you are a Tour Leader for a trekking holiday. It may seem 'forced' to give praise to clients, seeing as they are there primarily for relaxation or enjoyment purposes, as opposed to being on a more structured learning-based course. The crux of the problem, then, is perhaps not so much that praise *is* awkward, but because we *feel* awkward about it.

Think about this for a moment. Do we view praise as a negative and unnecessary part of our work? Or is it because we don't feel comfortable expressing it? Praise can be a very positive and encouraging part of our role, as long as it is expressed with conviction. If I generalise and say "well done everyone", I am only adding it in as an afterthought – a sort of "hmm, probably time to say something encouraging here". There is nothing genuine, specific or even personal about this. At the other extreme, I am not going to be over the top. Doling out praise too often, and for the smallest of acts denigrates its worth, too. Few clients will feel encouraged or valued if you say things like "Fantastic! You've tied your boot laces!".

Nope. The trick here is to think about what we might use praise for, and then choose our language and timing carefully to make it count. If I have a client who is actually struggling each day to tie their boot laces properly, finding that they frequently work loose,

then maybe I can demonstrate a top trick for tying them more securely, explaining how the new lacing/knot supports their ankle and reduces heel lift, etc. Then, when you see that no time has been spent stopping to re-tie laces during a day, perhaps there is your opportune moment to simply say "Looks like you've nailed that lace problem". This is still praise, it's just more appropriate.

Of course, giving praise and feedback may not be the only behaviour that we struggle to apply to our work. Another perceived problem area is the behaviour of 'Encouraging followers to create and implement their own solutions'. If a paying client asks for an answer, do we go around the houses and throw a question back at them, transferring ownership? Or do we just give them the answer? It depends entirely on the relationship you have with your clients. If they buy in to learning more and taking greater ownership, then great – ask if anyone else in the group can answer the question – share the knowledge! If that is not appropriate, then perhaps try another way, or just don't do it. Try another of the behaviours to focus on.

The take-home message here is that while the seven behaviours are proven to get more from followers, even just one or two of these behaviours will still have a positive result. This allows us to demonstrate whichever behaviours we feel most appropriate, and perhaps challenge ourselves to try some that we perceive to be more tricky. We all learn from trial and error, so perhaps it's worth not giving up on an entire behaviour, but trying a different angle instead.

If we want our clients/students/followers to get the best from themselves, then there are seven behaviours out there for you to try. If one seems awkward, try and examine what it is about it that doesn't work for you. Perhaps it is simply our interpretation of what it means, rather than what it actually is.

The INSPIRE model is there to support the work you already do. There are no strict rules, and no caveats about how you use it. Simply by using any part of it, your followers get more from you and themselves. Now that's customer satisfaction. ■



Dr Samantha McElligott is a Mountain Leader and leadership consultant and has been an active outdoor practitioner and expedition leader for over 15 years. She specialises in research-led leadership development, particularly in the outdoor context. Her research interests include quantitative examination of the impact of leadership; transformational leadership development; and the effects of outdoor learning on outcomes such as self-esteem and teamwork. Samantha lives in Snowdonia, loves adventures at home or overseas, and enjoying days out on the hills with tea and cake to follow.

INSPIRE Leadership Behaviours

I	Inspire and motivate your followers with a unified vision
N	Nurture an environment of team-focused goals
S	Set the example you want to see in your followers
P	Praise, and give constructive feedback to help your followers develop
I	Insist on setting high standards, relative to each individual
R	Recognise and respond to each individual's needs
E	Encourage followers to create and implement their own solutions



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PERSONAL JUDGEMENT AND DECISION MAKING IN MOUNTAIN LEADERS

WORDS BY PAUL AMOS AND LOEL COLLINS

ABOVE Discussing a suitable route choice. © Belinda Buckingham.

When you think about it, the world of the Mountain Leader appears to be dominated by technical skills, knowledge and experience. A prospective candidate for this qualification cannot even apply for a training course until they have built experience through the quality mountain day (QMD) process.

The training course itself focuses on skills and knowledge, ropework, navigation, environmental awareness. However, as is reflected within the assessment process, these declarative capabilities are manifested through a process of judgement and decision making. In mountain leadership, the leader makes nearly all the decisions; sure the followers may have a say in what is going on but the leader makes the final call. This high decision making loading is what we might call a 'nested' response of both logical and intuitive processes that are significantly affected by situation awareness, comprehension of the demands from the group, and the appropriate use of experience. But as Mountain Leaders, how aware are we of how this process works? How much importance do we attach to it and how are these skills learnt, developed and refined? We decided to find out and the results of our research have now been published "Examining the perceived value of professional judgment and decision making in mountain leaders in the UK: A mixed-methods investigation." (Collins, L., H.J Carson., P Amos., and D Collins. 2017). Journal of Adventure Education and Outdoor Learning.

It seemed that Mountain Training UK also thought that these questions were important, so they gave us access to the membership via email in autumn 2015. Our first step was to assess the level of consensus regarding the value, development and deployment of judgment and decision making via a questionnaire and 331 people responded. We found that decision making skills did not at first seem to rate terribly highly with our respondents. Capabilities such as camp craft, ropework and social skills all scored more highly. However, when we delved a little deeper our Mountain Leaders strongly felt that good judgment was essential as was learning from experience

although they were less agreed on how this could be developed. In addition, participants strongly believed that logical thinking dominates the decision making process (not intuitive or gut feeling) and especially during the planning stage. This interested us as the existing literature on these matters clearly demonstrates the influence of intuitive processes on decision making, hence the 'nested process' observation earlier; this was not something that seemed in the minds of our respondents who appeared to believe that their own decision making was almost entirely 'rational'. Given what we knew about these processes, this now became the focus of our interview research phase so our next step was to look a little deeper into the development and utilisation of these skills by carrying out in-depth interviews with 8 of our responders, all of whom were qualified Mountain Leaders, International Mountain Leader or British Mountain Guides.

The interviews were conducted using a well-established critical incident technique, a semi-structured process that allows the interviewer to illicit key information and for experiences to be explored in greater depth in partnership with the interviewee.

What emerged were four higher-order themes:

- 1 Meta-cognition** – Capacity to reflect on the process and outcome of the decision and ability to anticipate changes in a situation and accommodate new variables into the leadership process;
- 2 Diverse mental models** – 'What if' anticipation, evolution of planning in accordance with anticipated situations, engagement in the decision-making process and contextual impact i.e. span of control;
- 3 Judgement and decision making** – Reflection, feedback, community of practice i.e. certain accepted ways of doing things;
- 4 Contextual framework** – Situation awareness, interaction awareness, technical skills, non-technical skills and transferability i.e. skills from previous occupations such as military or emergency services.

These emerging themes are strongly reflected in the existing literature on personal judgement and decision making in time/risk critical situations; in particular the relationship between technical skills i.e. navigation, ropework etc. and non-technical skills i.e. leadership, decision making, situation awareness. Indeed the process of perceiving the situation, comprehending it and anticipating a future state is a fundamental element of decision making in this

context and was one readily identifiable in our interview subjects. The interesting observation is that although the questionnaire evidence suggests that Mountain Leaders understand this to be a purely logical process the interviews showed that this is not as 'rational' as it first seems and that indeed intuitive processes such as meta-cognition, personal judgement, diverse mental models and a contextual framework do play a part. Indeed, our interviewees described a complex relationship between rational and intuitive processes. Often when they thought they were being entirely rational we saw evidence of gut feeling at work and vice versa; again this is very much reflected in the existing literature.

Accepting therefore, that decision making processes are important to Mountain Leaders and that in their work both rational and intuitive processes underpin all their activities, it is perhaps surprising that the specific understanding of these fundamental elements is not specifically covered by the existing training and development guidance. It's almost as if the development of sound personal judgement and effective decision making is left to chance, a by-product almost of the experiential and technical skills based programme. In other adventure sports coaching areas and indeed in wider risk critical situations such as incident command, flight crews, medical teams etc. recognising that leadership is complex and requires flexibility and adaptability has focused training to be more aligned with practice with a need for a mixed assessment of both declarative technical skills and decision making.

In our study two main skills development themes emerged; transferred leadership skills from previous employment (e.g. emergency services, business, military etc.) or via a process of experience and self-directed reflection. Both methods require quality practical experience as a Mountain Leader, reflective and metacognitive capacity. This process of directed experiential learning is not facilitated in the Mountain Leader scheme. As a result, learning from QMD's is potentially ad hoc in nature, relying on reflective skills that are, also, learnt and transferred from other contexts. The QMD process is a valuable

element of the development of a Mountain Leader. Our suggestion is that integrating metacognitive training alongside technical and non-technical skills, with a clear contextual framework that includes prioritised mental models is an obvious way forward. As is reflected in other risk critical training scenarios, requiring the leader to articulate their decision making and explain how it is derived is a proven method for developing and maintaining this crucial skill.

Our study has identified that this group of Mountain Leaders highly value decision making in all its forms but that these skills develop in an ad-hoc manner. We have found that the existing training structure is advantageous especially dealing with practical requirements. However, stronger more formalised emphasis on the judgement and decision making process via an explicit focus on decision making and the development of reflective skills will maximise the QMD process. This approach may reduce the reliance on self-development of these crucial skills. Many aspects/elements of the time/risk critical, such as the emergency services and some other NGBs have woken up to the need to focus on the way that we make decisions, is it time in leaders and instructor training?

Editor's Note (John Cousins)

UCLan has subsequently worked with Mountain Training in its review of the climbing qualifications and the revised or new syllabi recognise the value of reflective practice. An interim review of the walking qualifications will follow and will no doubt similarly acknowledge the value of reflective practice. The Mountain Training Association has a pilot mentoring programme underway that further facilitates this process (see previous articles by Sam McElligot) and Mountain Training and Bangor University are half way through a research PhD project looking at improving completion rates, specifically within the Mountain Leader scheme. This will very likely provide further insight in to the guided support that trainees can benefit from and which, no doubt, will inform further developments within our qualification schemes. ■



Paul Amos is a former senior fire officer who now teaches field operations and disaster management at Coventry University. Paul is a Mountain Leader and a National Navigation Award Scheme tutor. His research interests also lie in decision making and leadership and it is those interests that lead to this research project. Please get in touch with Paul at
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Loel Collins is an academic based at the University of Central Lancashire. Prior to becoming an academic he has worked extensively in the outdoors as an instructor, coach and guide and has high level qualifications in a range of activities including telemark skiing, mountaineering, kayaking and canoeing. His research interests lie in the understanding and development of complex decision making in complex environments. Please get in touch with Loel at
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Decision making on rocky terrain.

KEEPING AN EYE ON THE BIGGER PICTURE

THE STRATEGIES #2

In the Spring issue of *The Professional Mountaineer* I discussed the concept of 'Big Picture' thinking and how it can allow us to remain more objective during both our professional and personal time in the mountains.

In this follow up article I'm going to suggest two ways in which you prevent narrowing of vision, reduce the chances of falling prey to comfort, ease and convenience and begin to manage limiting patterns of thought/behaviour.

WORDS BY JP EDGINGTON

Strategy #1 Watch your language!

"A word does not start as a word – it is an end product which begins as an impulse, stimulated by attitude and behaviour which dictates the need for expression." – Peter Brook

I'm not talking about Effing and Jeffing here but how language can be a very powerful and useful way of accessing and understanding what the beliefs and assumptions about a given situation might be. By being more aware of what we, our clients and colleagues say we can identify potentially short-sighted aspects of attitude or behaviour and address them before they create issues. It's a massive subject area but I'll include this just as an example:

Need vs. Prefer, Have to vs. Want to.

In short, if we label what are really only preferences as needs then we begin to remove the possibility for options like backing off or more appropriate alternatives.

"I really need to get these QMD's done this week as I've spent a lot of money getting here and I'll not get another chance any time soon."

"I need to get the group to the summit as I promised them I would."

Equally, issues arise when we term 'Musts' and 'have to's' as preferences.

"In an ideal world it would be good to give everyone a proper safety brief but in reality we don't always have time."

"I haven't used a group shelter in months so I don't see the need to take one every time."

Try this – write 'Need or Prefer' somewhere prominent like on the back of your hand or take a photo and use it as your phone's wallpaper or lock screen for a couple of days. What we're aiming for here is an increase in our awareness of the language of ourselves and others so we can catch any mislabelled thoughts, re-frame them, remain more objective and better manage expectations. Since our use of language is very habitual and pattern-like, what this gives us is a 'pattern interrupt'; a form of 'catch feature' to help us recognise when we might be losing sight of the big picture, allowing us to adjust our course, stop us going down the wrong path and – given our roles – potentially taking others with us.

Other questions to help regain a bigger picture perspective:

Would you do this if you were on assessment or as part of providing evidence for a court case?

Would you teach someone else to do this? Would you do this if your boss/staff/peers were watching?

If not then you need to ask why you are contemplating/doing it now.

Sometimes it's really hard to differentiate and be able to have that level of clarity about our thoughts which will provide a basis for balanced decisions, especially when working in isolation or when there are a lot of variables or 'grey areas' that need considering – which is why it's really important to use:

Strategy #2 Discuss and plan

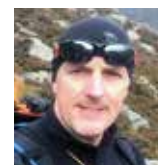
- Openness and honesty. Keeping these topics and issues as part of regular conversation, discussing and deciding in advance the potential traps and ways to avoid them reduces the chances of them becoming problems.
- Have options. Have an ideal option if all things line up (and note what those things are), a backup option and a plan for bailing early or not even going at all.
- Set points of 'no further progression'. These can be weather or terrain conditions and/or time/location. Get into the habit of sticking to them.
- Hold yourself accountable by discussing grey areas or more challenging situations openly with a trusted peer or mentor and/or with everyone in the group (where appropriate). If you don't feel comfortable discussing a particular plan or decision with a peer or mentor then that in itself is quite telling – ask yourself why, answer with honesty and go discuss it with them anyway. I understand it's not always possible to do in advance but it could be done as part of a personal review of the day. Many of us work on our own, so having a sounding board is really important – we might just have to quieten our ego and put up with some discomfort in order to reap the benefits.
- Manage expectations of all involved (you included) as it's one of the best ways of avoiding situations where you feel overly committed or like you have run out of options. Having potentially 'tough or 'uncomfortable' decisions with people early on in the day/session/booking process/planning is a lot easier than later in the day/session/trip when tiredness, hunger, feelings of commitment and scarcity are increased in both them and you.

Doing the right thing and being proactive takes effort. Making the tough decisions will often be uncomfortable to do and we might not be popular as a result. We might lose face, we might disappoint our clients by not getting to the summit or getting X number of climbs done during the session. However, if the decision was made with due consideration, stemming from careful assessment and honestly held beliefs then it's very likely to be the right decision and it's just part of our job to deal with any discomfort that might arise in order to protect our clients, organisations, industry and ourselves from the potential for much greater harm.

There are only ever a few decisions between the big positive impacts that our industry can provide and the more severe consequences. By keeping an eye on the bigger picture I believe we'll be better able to navigate our way through those decisions. ■

"The mountains will always be there, the trick is to make sure you are too."

– Hervey Voge



JP Edgington holds the Mountaineering Instructor Award and is a member of AMI. He runs his own business, The Outer Edge, providing mountaineering activities, charity challenges and risk management. John also offers workshops based on the principles in this article.

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Dave Hollinger on Stac Pollaidh outcrop. © Ed Smith.

WORDS BY SHAUN ROBERTS



CELEBRATING 70 YEARS

To help an individual discover their own physical, mental and spiritual potential.

With these words, Glenmore Lodge, Scotland's National Outdoor Training Centre, was established, starting a 70 year history which has seen thousands of students of all ages and backgrounds either start their outdoor adventures, or turn their passion into a career.

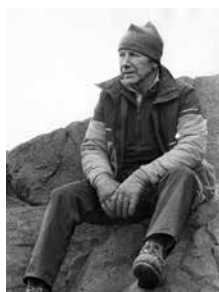
In a post second world war era, society was on the cusp of massive change and educational philosophies were being evaluated amongst

concerns of over-urbanisation. Lord Malcolm Douglas-Hamilton, credited with the vision and foresight to realise the 'Glenmore Idea', writes – 'not only to give young people the opportunity of an introduction to the treasures that a true appreciation for the country can provide, but also to inspire young people so much with the idea of healthful outdoor recreation that they would act in their own localities as advocates'. With this as the background, the Scottish Sports Council (now known as **sportscotland**) created Glenmore Lodge.

The aim was to provide 'boys & girls, men & women, with new skills of moving safely in, living in, understanding and appreciating a completely different environment' (Murray Scott, A history of Glenmore Lodge).

For 'The Lodge', the outdoors represented more than just a physical challenge. This ethos still runs through the heart of the present-day training philosophy. A visit to the archives at Glenmore Lodge will provide the reader with a powerful sense of the belonging that students felt after their time here. That sense of belonging continues today for both staff and students alike and it remains important to us to present the values of our mountaineering communities in all that we do.

The early days of Glenmore Lodge offered, what was referred to until the 1970s, as Holiday Training Courses, in downhill skiing, ski touring, ski mountaineering, Nordic skiing, snow & ice



1. Karen on stance, bringing up her second at Stac Pol-laidh. © Ed Smith. 2. Image capturing a course in the 1950's. LEFT PORTRAIT Eric Langmuir, principal 1963-1970. RIGHT PORTRAIT Fred Harper, principal 1970-1986.

climbing, winter mountaineering, hill walking, canoeing, field studies and rock climbing. During this period there was a real sense of promoting new values and resilience in students but also development within the sports themselves. This development, as today, could be segmented between sports and coaching development.

Each decade brought its own change to Glenmore Lodge. The 1950s and 60s were firmly in the 'holiday training' style, for groups of young people, for clubs and for individual people looking to develop personally against a background of outdoor sports development. As local authorities acquired and built centres throughout the country, a shift in the Centres' role took place, away from hosting schools to a focus on training and qualifying adults to lead youngsters safely and competently. Under Eric Langmuir's guidance in the 1960's, the Lodge played a major role in Mountain Leader training and qualification.

According to Murray Scott (Principal 1955-61) the demand for informed and insightful skills training is driven by an ever-increasingly sophisticated client group and Glenmore Lodge began to be referenced as a 'Centre of Excellence' for a number of sports. From 1970 the charismatic Principal, Fred

Harper, continued to develop a culture of insight, high performance and specialisation within the instructors, and the first references to 'National Centre' appeared.

Today I refer to Eric and Fred as the Scottish grandfathers of the modern national centre. They both led a drive for insight, knowledge, performance and standards. I hope and believe they would recognise that drive within our culture today.

Who amongst us has not referenced *Mountain Leadership* by Eric Langmuir?; a book first published and fully funded by **sportscotland**. To support an update of a later edition I had the pleasure of taking Eric winter climbing in the late 90's. Warm and wet conditions that day did little to promote the virtues of modern equipment and techniques, but the day remains memorable for me because of Eric's company and the many stories of a past era at Glenmore Lodge.

Today Glenmore Lodge is one of three national centres within the **sportscotland** family. Funding into Glenmore Lodge has always directly supported those aspiring to governing body qualifications. Professional mountaineers have been significantly supported in other ways by **sportscotland** to; who under the guidance of their national

centre have been consistent in recognising both the value and also the risks of the Scottish mountains. We continue to operate the Scottish Avalanche Information Service along side our National Centre, a service fully funded since its origins in the late 1980's, and we remain the only UK national agency to invest in mountain weather through MWIS. In keeping with the work of our predecessors at Glenmore Lodge, we continue to advocate continued investment into services which support professionals and 'risk aware' participation in general.

The Cairngorm Plateau disaster in November 1971, when five Edinburgh teenagers perished in winter conditions whilst on a school expedition based out of their local authority centre, further galvanised the need for good governance and qualifications within outdoor education. This incident no doubt had a profound impact on Glenmore Lodge instructors who were involved in the rescue, and no doubt acted as a collective point of reference for the numerous Lodge instructors who have spent many dark and stormy hours on the Plateau assessing the skills of aspirant mountain leaders.

Whilst the origins of our mountain qualifications go back to the mid 1960's, the



1. Early abseiling at Chalamain Gap.
2. Initial days of skiing at Glenmore Lodge.



role and purpose of Glenmore Lodge is forged sometime later influenced by this significant disaster in a similar way that the Weymouth disaster influenced thoughts on governance and good practice, leading to Adventure Activity Licensing.

What is different today? Well take this magazine - *The Professional Mountaineer*. Listed on the front you see four mountain associations, representing those qualified through BMG or Mountain Training frameworks.

Behind these governing body frameworks are international, UK and home nation bodies. Many reading this will have a paid or voluntary role within this diverse sector and you will know that we spend a lot of time and energy looking forward and working on positive changes. For a moment reflect on what we have achieved over the years...

Our professional mountaineering sector has a lot to be proud of and Glenmore Lodge is proud of its role within that collective achievement.

Fundamentally though, there are greater complexities today than previous years. Understandably we continue to work with governing bodies today as a key development partner and provider. For the Mountain Training UK and Mountain Training Scotland pathways this has a focus on ensuring development, resilience and capacity within providership of the qualifications. We continue to invest in both the tutor and director workforce but also the development of insight within the qualification syllabi. For BMG pathways we focus on supporting the Scottish winter elements through close relationships with BMG Lead Trainers with a focus on facility, trainer and aspirant support.



Shaun Roberts was appointed as the Principal of Scotland's National Outdoor Training Centre, Glenmore Lodge, in 2014. His career spans more than 25 years of teaching and instructing throughout the world and across multiple disciplines, including Mountaineering, Climbing, White Water Kayaking and Sea Kayaking, Swift Water Rescue and Mountain Rescue.

Qualification pathways have multiplied to meet the needs of the industry; we operate associations and businesses in a world more driven by, and dependant on governance, compliance and health and safety. Indeed many of you may perceive risk to our sector from these new levels of governance, but it's these complexities that make me more confident about the future role of Glenmore Lodge. There is a lot to navigate in the future as our sector develops. This magazine remains a tribute to the concept of collaboration on that journey and Glenmore Lodge will continue to bring resilience, capacity and insight into this collective journey.

Qualification training and assessment along with skills training is for many, the most visible part of what we do, but there is a lot of development work going on in the background. Our hunger for knowledge and insight is just as strong today as it has ever been, and our culture of continued development is one handed down over many decades. Whilst we stand on the shoulders of those who have gone before we remain driven by the objective to be a relevant national asset and resource today. Our language is changing. We now talk about DISCOVER/LEARN/ADVENTURE/QUALIFY. We understand that the complexities of life get in the way of sporting participation and qualifications, and we understand that participation is about much more than getting to the top of the mountain. The pathway is unique to you, the reasons to participate are unique to you and it is our role to have something to support you along a lifetime of participation.

We're reminded of those original words in 1948 – **discover your own physical, mental and spiritual potential.** ■

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BOOK REVIEW

TIDES

A CLIMBERS VOYAGE

by Nick Bullock

Reviewed by Martin Chester

Tides is the second book from Nick, following on from the highly acclaimed *Echoes*. If *Echoes* was an account of Nick's liberation from the daily grind of his life as a prison officer; then *Tides* is a reflection on the motivations and the cost of making difficult life choices and having a single minded focus as a professional climber.

Simplistically, *Tides* is a chronological collection of Nick's antics with some of the world's leading climbers. Charting his adventures from 2003 to 2016 these stories are woven together with the threads of Nick's past and his hopes for the future. Far more than the simple diary of a climber, it gives a fascinating insight into the mind of one who has chosen to live a life less ordinary.

Nick is also well known for his brash and enthusiastic articles, which I have always enjoyed. But articles, like Facebook posts, give a simplistically independent snap shot of a single chapter or episode in life. With this book, Nick opens up and bares his soul, to expose how these adventures fit together in the complexities of an unusual life. I must confess that I hadn't noticed what a good writer Nick had become from his articles alone – focussing more on the enthusiastic content and debate of the moment. But with this book, Nick skilfully weaves this collection of adventures into the fabric of his life.

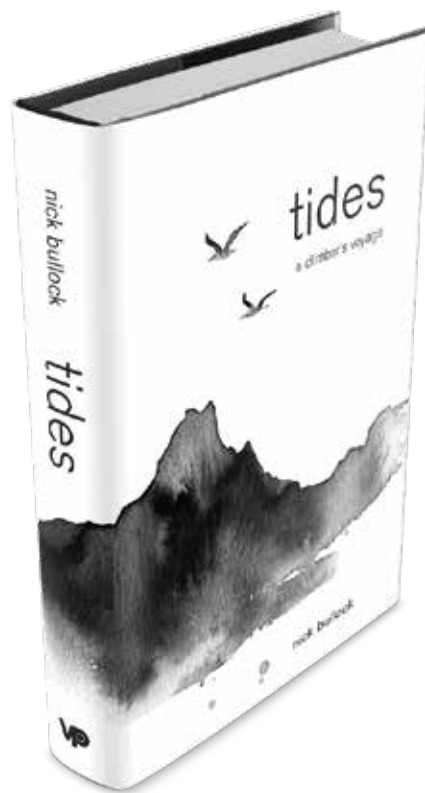
Why I liked it

It seems that writing your autobiographical memoirs is the derigour extension of income for the professional climber, and there are an abundance of talented climbers that write their memories (and probably shouldn't) just to milk a few extra quid out of the glory days. Many of these result in quite mediocre books that don't really do justice to the great adventures and achievements of their time.

The shelves are full of recent books in this genre. But *Tides* compares favourably with any of them and is a cut above in terms of the quality of the writing alone. In my experience, there are very few who are great narrators as well as amazing climbers: Steve Venables, Rob Collister, and yep – Andy Kirkpatrick. For me, Nick is now right up there thanks to this book! You won't find clever word-smithery taking over for the sake of the art form here, but you will find beautifully crafted and descriptive writing that will whisk you off into the moment and give you a really vivid insight into the world of Nick.

Nick has always been driven and fanatically so. Whether living in apparent squalor in his van or grinding out the miles running up the rainy Llanberis pass, he is a character I would often see on my drive home. We've been close but worlds apart for many years.

It is easy to make assumptions about a life that is so single-mindedly focussed on climbing. But in this book I found a window into Nick's soul. And it is a soul that will stare straight back at you and have you questioning your own motivations. We all spend our lives trying to get the right balance between our passions, our work, our hobbies and our family commitments. This is rarely easy, and I know of noone who claims to have got it just right (or without wrestling with it along the way). So this is a fascinating and brutally honest insight into someone who has drawn the line and tipped the balance in such a different way to me, yet so many of the issues are just the same.



Why you should read it

This is a beautifully written and fascinating insight into the reality of a life less ordinary. If you have so much as an inkling of curiosity as to what it takes to be a fulltime climber, have a read.

Tides is a great name. I'm not sure if we are on the same wavelength here (excuse the pun) but this is a book that will flow in both directions. From Nick to you and back with the calm yet relentless force of the ocean.

To climb with Nick is to observe a force of nature in action. A bizarre sinewy bundle of energy that is Tardis like, in being bigger on the inside than the exterior volume of its owner. His wild grin, the effervescent enthusiasm, the zest for life and the craic. And in this book, you get a really genuine slice of that on every page. You get the feeling Nick really wants to share, not just the stories and anecdotes, but how it feels to be in those situations, and what it takes to make it all happen.

Who this would appeal to

This book would appeal to anyone who is curious about such a journey into the mind of a driven climber, served up in intriguing bite size chunks. You may expect to discover the true level of Nick's passion for climbing. What you will find is that there is more of a zest for life and appreciation of adventure shared with great mates, than you ever imagined.

This should be compulsory reading for any talented young star looking to sustain (and survive) a life in the mountains as a professional climber at any level.

Written in short punchy chapters, it would make the ideal expedition or holiday book – perfect for dipping in and out of for as long as you have got.

I'm not sure this level of introspection (some may call it navel gazing) will be for everyone, so if you are not intrigued about the angst and the doubts and the mind behind the adventures, then stick to Nick's entertaining and more simplistic articles. What you get here is the whole package: warts and all. ■

'For decades Mick Fowler has been going to places where nobody else has been before and climbing bold routes in a unique style. He is a model and an inspiration for all future adventuring.'

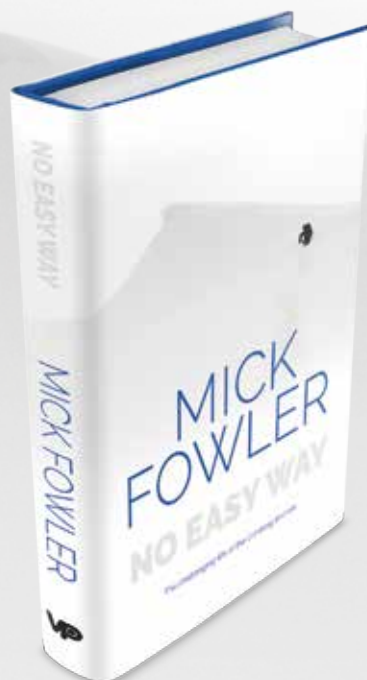
REINHOLD MESSNER

'Every generation has a climber that sets standards – Mick Fowler is one of those people. His routes stand out for their vision, boldness and above all purity of line; he is a trail blazer and inspiration for the next generation.'

KENTON COOL

'I admire the way Mick Fowler seeks out projects, always new lines in remote places, and the style he climbs them in: a pure style. A real inspiration for all of us!'

CATHERINE DESTIVELLE



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GEAR REVIEW

The Beal Escaper Is this a viable and safe solution to single strand abseil retrieval?

Review by Jon Punshon

One of the skills that every alpinist and mountaineer must master is the art of safe and efficient retreat. Usually this means abseiling all or some of the descent, and the further you can abseil, the quicker you can get out of trouble. The length of the descent has traditionally been limited to half the total length of rope/s carried although there have been numerous ingenious attempts to find a way to abseil on a single strand of rope and still retrieve it. Most of the single strand rope abseil solutions are not for the faint hearted and have not gained a popular following, with most climbers preferring to enjoy longevity and avoid tragedy!

The Beal Escaper is, to my knowledge, the first device that has been commercially available that facilitates single strand abseil retrieval. Having tested the device extensively I have to say that my view of the product has shifted from deep skepticism to complete trust and confidence in its ability to deliver.

The Escaper weighs about the same as a small bag of crisps and comes in a small stuff sack allowing it to pack away to a size just a little larger than a Mars Bar so it is not going to take up much space in your pack nor is it going to add any weight to your load.

How does it work? The device is basically a short length of climbing rope attached to a permanently formed prusik knot in tape. By threading the tapered blue section of rope into the prusik knot (Figure 1) until a distinct black mark on the rope has passed through the prusik (Figure 2). This then creates a rope loop that can be clipped into the anchor that is to be used for the abseil. The abseil rope is then tied into the reinforced loop on the Escaper with a suitable knot (Figure 3).

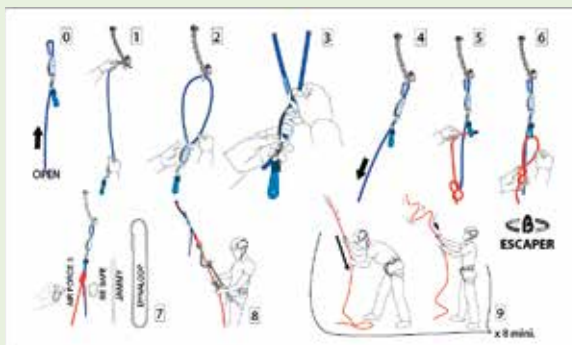
Now for the interesting bit! Having completed the abseil, retrieval is achieved by repeatedly pulling and releasing the abseil rope. This has the effect of progressively moving the short blue rope back through the prusik until it is completely released. This process takes about a dozen pull and release actions before the rope and the Escaper come free.



Figure 1



Figure 2



The question that I asked and I'm sure that you are already asking yourself is - "What if you have a bouncy, stop-start abseil, won't it release the prusik with catastrophic consequences?" The answer is no, because the release action of the prusik requires there to be no tension at all in the system and there is always tension in the system when abseiling, even it is just provided by the weight of the rope. The pull release action only frees the prusik if the rope can "spring" upwards freely. This action is not created when abseiling, even if you repeatedly stop mid abseil or even rest on a ledge mid abseil, because there is always the weight of the rope in the system pulling down on the Escaper. I have tested the device at my local wall and tried unsuccessfully to get it to fail; and have used it a number of times outdoors. It is a leap of faith; a bit like the first time you trust an auto belay, but it works!



Figure 3



Would I recommend using an Escaper routinely for abseiling? The answer to this question is probably no I wouldn't, although it does allow the climber to save weight and seriously consider just carrying say one 60 metre rope in the mountains. I don't think that the device was designed for routine use, and the clue to its real worth is in the name The Escaper. To have in your pack a device that allows you to double the distance that you can abseil and still retrieve your rope/s could be a lifesaver in an emergency situation. Because it is so small and light I will always carry this device in the mountains now.

Check it out and overcome your skepticism! ■

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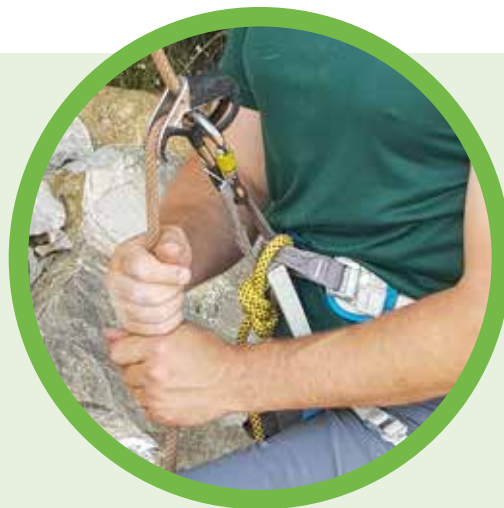
GEAR REVIEW

Black Diamond ATC Pilot

Review by Jim Walton

Assisted braking devices have become the device of choice at many indoor walls and sports crags. The ATC Pilot falls into the subsection of assisted braking devices with no moving parts. It looks like the Black Diamond ATC Sport with a Stainless-Steel spout and a bit more plastic. It's designed to be used as a single rope assisted belay device and works by the geometry of the channel; the rope and the belay karabiner interact to give a dynamic catch. The rope threads through the Pilot the same way that the standard ATC does, so for folk used to belaying with a tuber style belay device there will be some familiarity. There is also a simple diagram on the device, so you shouldn't go wrong. As the Pilot works by rotating within the internal shape of the belay karabiner you need to use a large HMS karabiner.

In a bottom rope set up I found taking in the rope very intuitive. Lowering was a little different. The instructions say put your upper hand around the Pilot and gently rotate it with your lower hand on the rope, the more you rotate the less friction there is and the faster the person descends. I found it easier to have the thumb of my upper hand under the spout and slowly lift to reduce the amount of friction. This had the added benefit of having both hands on the rope when lowering.



On first use in a leading set up I found the Pilot naturally locked up when I tried to pay the rope out. A quick re-read of the instructions put my lower thumb below the spout meaning that when I needed to pay the rope out quickly I lifted the spout. The lower hand still has hold of the rope below the device so should the leader fall you are still in the correct position to lock off the device.

A quick visit to the wall showed that there is good potential for this device to be used in a 'bell-ringing' system.

What I didn't like about the pilot was the sound the plastic loop made against the carabiner, which made the device feel cheap: a rubberised coating would be an improvement. Also I rather fear about the strength of the device if I stood on it but all in all, a good device that I think will be my 'go to' sport crag belay device. ■

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