## The Professional Mountaineer

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#### The Professional Mountaineer

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#### **NEXT ISSUE**

Winter 2019 Rock fall at mountain crags, duty of care - part 2, rope awareness. Copy deadline: Friday 18 October 2019.

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#### **Our front cover**

An early start can reap rewards: A hike up the Glyders to bivouac on top of Glyder Fawr provided a stunning view at 5.30am. © Chris Mills.



#### **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.



РНОТО Editor demonstrating improvised hoist in Ladakh. © Steve Long.

#### Mountaineering activities have featured heavily in the press recently. As I write this editorial, some good news is coming in.

Our athletes are currently doing well in the climbing World Championships in Japan. A badly injured Italian climber was successfully rescued on Gasherbrum VII despite the odds stacked up against him. But much of the news has been quite devastating. We have lost several of our most talented and experienced mountaineers including some famous and highly respected members of the professional community. The effects of climate change seem to be all too visible in the Alps this summer season, with many routes subjected to significant rock fall and collapse. Another batch of highly publicised queues on Everest was brought into sharp focus due to a number of altitude-related deaths.

Our mission as leaders, teachers and guides is to share our hard earned knowledge and skills with our clients and students. Mountains and crags are constantly eroding. Earthquakes and volcanic eruptions are a potential hazard in much of the world. Rockfall and avalanche threaten any slope or crag, sometimes triggered by chance events. We cannot eliminate the risks, but the combination of experience and training

gives us the skills and knowledge to access the "bullseye" planning information and to spot signs and symptoms of changing conditions to reduce unnecessary exposure - as long as we operate within the scope of our qualifications, which is what we have promised our insurance company we will do. Site-specific training from a suitably experienced technical advisor can extend this scope within defined limits.

Within these pages we offer you some exciting contributions to our understanding of the Duty of Care that we owe to our companions and their families. We have some helpful advice for climbers wishing to extend the scope of their activities, with particular emphasis on the subtle crafts of teaching lead climbing and coaching experienced climbers. We also explore teaching compass skills, including some interesting lateral thinking that will definitely be going into the next edition of Hillwalking...

**Steve Long** 

**Technical editor** 

#### OUR COVER





#### **Chris Mills**

Chris is a structural engineer and trainee Mountain Leader with a passion for the mountains. He is pioneering a project called Xbox2Summit. designed to encourage young children to swap their computer games for the great outdoors.

www.xbox2summit.com

#### OUR AUTUMN ISSUE CONTRIBUTORS INCI UDF



#### John Biggar

John has been climbing, skiing and exploring in the Andes since the early 1990's, and has now skied over 100 different summits out there. Back home. he is a Winter Mountaineering and Climbing Instructor based in south-west Scotland.



#### **Esther Foster**

Esther is a freelance Mountaineering and Climbing Instructor based in the Lake District. She teaches and coaches sport climbing abroad as well as in the UK, alongside trad climbing and mountaineering work.



#### **Mehmet Karatay**

Mehmet is a Mountaineering and Climbing Instructor and a Winter Mountain Leader with a lively enthusiasm for coaching. He runs Northern Aspect Mountaineering as well as working freelance, he is based in the Cairngorm National Park.



#### **Nathan White**

Nathan is an instructor at Glenmore Lodge and climbing is his passion. It has taken him to some amazing places, from alpinism in Alaska to Big walling in Yosemite. On these adventures, Nathan has gained a wealth of knowledge.

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#### THE LEADERSHIP CLINIC



Feeling inspired?

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



## "Duty of Care"





#### **Fancy advertising?**

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### **NEWS**



At the May committee meeting it was decided to implement fully the mandatory CPD requirements for AMI membership from April 2021. This was agreed at the AGM in 2011 and will bring the association in line with BMG and BAIML. Before 2021 work will take place to inform members of the processes and simplify the structure of CPD within AMI.

A 'welfare' fund has been set up to assist members and their families in the case of immediate hardship, following injury when operating within the remit of the qualifications. This will hopefully take some of the initial pressure off in difficult times for members.

Following some discussion on social media a working group was convened to look at ways the AMI website can better represent the wide range of work carried out by members. It is hoped to implement any changes in the autumn, along with other suggestions from the group.

Jim Walton is welcomed on to the committee as Communications Rep, and members will have already seen some changes. He builds on the excellent work that Jez Brown has done over the last few years and we are indebted for his work in that time. As Jim was the Peak Area Rep this role is now vacant and members are encouraged to apply!

Phil Baker (Chairman)



AMI is the representative body for professionally qualified Mountaineering and Climbing Instructors in the UK and Ireland and is committed to promoting good practice in all mountaineering instruction. Full members hold the Mountaineering and climbing instructors qualification or higher qualification the Winter Mountaineering and Climbing Instructor.

**⊺ 01690 720123** www.ami.org.uk



The loss of our colleague Martin Moran, along with his six clients and their liaison officer in Nanda Devi East earlier in May overshadowed the start of the summer season for many BMG members. Much has been written about Martin and you can read more about his extraordinary life in the BMG tribute to him. Our sincere condolences are with his wife Joy and their children Alex and Hazel, along with the relatives of his clients.

The Arc'teryx Alpine Academy held in Chamonix in July was a huge success with eight BMG Guides delivering workshops on topics ranging from alpine climbing to bouldering.

After the recent Summer Alpine Assessment, I am pleased to say that we now have six newly qualified IFMGA Mountain Guides within the BMG. The test was convened in Chamonix and the Mont Rosa massif and was described by one candidate as 'a superbly testing test!'

After a wet and snowy May in the Alps, early season conditions were generally very good on glaciers and classic snow and ice climbs. From late June onwards however, hot and dry weather dominated and the mountains have suffered as a result, with rockfall being a big factor in Guides' risk assessments.

Kenny Grant (Publicity Officer)



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.

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### **NEWS**



## THE BRITISH ASSOCIATION OF INTERNATIONAL MOUNTAIN LEADERS [BAIML]



#### THE MOUNTAIN TRAINING ASSOCIATION [MTA]

With the summer season in full swing for most International Mountain Leaders, BAIML is preparing the AGM on Friday November 29th – Sunday December 1st at the Royal Victoria Hotel in Llanberis. Discounted accommodation is available before 29th September by calling the hotel directly. With nearly half of the rooms already gone and 32 different workshops expected, it looks to be shaping up into a vibrant and busy event. The conference team of Michelle, Kelvyn and Corinna expect workshops to be online for booking shortly. We very much look forward to seeing you in Llanberis!

Progress is being made for BAIML members regarding working in Italy from applications made recently to the Italian Sports Ministry. The process has been simplified and the documents required are fewer. This is in two parts, first to be recognised by the Italian government and then, second, to affiliate with CoNaGAI. As ever, we live with an uncertain future ahead in terms of how European we can be seen to be, so please make the most of our current status. As in other countries, these are agreements and processes negotiated by BAIML and UIMLA on behalf of members. UIMLA also has an exciting project emerging in the Balkans so watch this space.

Wishing you an excellent productive and summer and autumn season! The "canicule" or heatwave in France has certainly made for an interesting summer with temperatures of 38 degrees at 600m in June.

Anne Arran (President)



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.

**⊺ 01690 720272** www.baiml.org

MTA has some great opportunities coming your way this autumn, starting with the re-launch of the South West region near Bristol on Saturday 21st September – book your CPD sessions via CMS and come along to meet the new team of local volunteers.

On 23rd-24th of November we're taking our biennial autumn conference to the Lake District! We hope you can all join us at Derwent Hill outdoor centre for a great selection of CPD workshops, networking and talks. Bookings are now open through CMS and more information can be found on the MTA website under 'News'.

The pilot year for our mentoring programme has come to a close and we've been collating feedback and reviewing the year-to-date to help inform our second year of mentoring that begins imminently. We're looking forward to training our new mentors and introducing them to their mentees later this month, as the programme continues to grow.

We're excited to announce that we will be teaming up with AMI next year to host our first Health & well-being event. More information on dates and workshops will be confirmed in the coming months. We're also continuing to work in collaboration with all of the associations to enable us to provide support to its members should they be involved in a traumatic event.

Don't forget, the *International Mountain Trekking* publication is now only £9.95 for association members – the ideal reference tool for every trekker, from novice to expert, gap year traveller to seasoned trek leader. Get your discounted copy online in the shop!

Belinda Buckingham (Development Officer)



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



## HILLWALKING IN HONG KONG











WORDS AND PHOTOS (UNLESS OTHERWISE CREDITED) BY MEHMET KARATAY

#### Last October I was visiting family in Hong Kong and was pleasantly surprised by the quality of the hillwalking on offer. When most people think of Hong Kong, large areas of forest and mountain probably aren't what comes to mind.

Leaving the airport, passing under a gondola disappearing into the mountains, you get the first sense that there may be more to this place than assumed. Over the three weeks I had in Hong Kong, I went walking, climbing, coasteering and had to turn down the tempting offer of a canyon descent.

Hong Kong comprises of a peninsula off south-east China and a series of islands with varied geology. Only 24% of the land is developed and almost all of this is coastal; 40% of the land is designated as 'Country Park'. There are 33 peaks over 500m high with three over 800m high: Tai Mo Shan (975m), Lantau Peak (934m) and Tai Tung Shan (869m). Four long distance trails, ranging from 50 to 100km, cut across the region. What makes Hong Kong unique is the juxtaposition between the sense of wilderness and metropolis. The public transport is excellent and there is something particularly unexpected about going hillwalking by starting and finishing your day from an MTR (metro) station surrounded by tower blocks.

There are a multitude of places to discover and part of the joy is realising how much potential there is. Walking along the crest of Lantau island is excellent; I found this reminiscent of being on a Munro. Watching the vegetation change from jungle to moretypical mountain shrub as we walked up from sea level was very interesting. The Sai Kung peninsula gives excellent ridge walks in an area that reminded me of the Lake District, where you forget you are 'in' a major city. The walking in Kowloon and Hong Kong Island, while lower, is worthwhile for the experience of being level with skyscrapers when up a hill plus the opportunity to get close to (introduced) monkeys. The Gin Drinkers Line provides another interesting excursion: this was a defensive line built by the British that was swiftly over-run by the Japanese. The tunnels can still be explored, each named after a famous London Street. Lamma Island is also worth exploring, partly to experience its laid-back charm; no cars are allowed, and the buildings are no higher than three stories. Mt Stenhouse is its highest point and a short but worthwhile walk.

A "Countryside Series" of 1:25,000 maps with 20m contours are available from the government's Lands Department, but they are hard to source (editor's note: best to contact the local mountaineering federation for details - Google CHKMCU). The 1:50K series uses

50m contours so will be less suitable for walking. I found that the open source ViewRanger app was surprisingly accurate even with the smallest of paths. Locals use a free app called MyMapHK. I found it hard to get a general feel for my overall surroundings on a phone screen, so would have appreciated a paper map.

It took us a while to tune into what is marked as a 'path' on our maps. Early in the trip, we turned around a number of times thinking the path was now overgrown but we learned better over the trip. Once you get off the sign-posted paths, which are often paved in concrete, paths seem to be marked with cloth strips and a linear dent in the undergrowth. These paths, often along ridges, gave us our most fulfilling sense of exploration and solitude. The Chinese seem to flock to well-known walks but as you leave the one route that is popular in a given area you're usually on your own.

Hong Kong has excellent public transport links and makes getting to even rural places quick and easy. The MTR (Mass Transport Railway) is eye-opening and getting the ferries between the islands feels very romantic. To access Sai Kung we couldn't figure out the bus system so ended up hiring a taxi at a reasonable price. We found a ferry off again which gave a pleasant, early, end to our walk and a couple of hours later were back in central Hong Kong.

October, November, December tend to be the best months to go. Humidity is at its lowest, giving pleasant walking conditions, temperatures are in the mid-twenties, and there is the greatest chance of sunshine. The typhoon season is also usually over.

Hong Kong probably isn't a mountain destination I'd choose if that was the sole aim of my trip, but if you're looking to combine a fascinating city break with some mountains, or find yourself in the area, make sure you explore the hills. The climbing isn't bad either.



Mehmet Karatay is a Mountaineering and Climbing Instructor and a Winter Mountain Leader with a lively enthusiasm for coaching. He runs Northern Aspect Mountaineering as well as working freelance. He is based in Newtonmore in the Cairngorm National Park. In his 'spare' time he helps run Alba Chocolate and tries to get out climbing as much as possible.



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It's 7am. The four of us are walking towards the underground station through a run-down park, past crowds of faceless commuters wrapped in thick overcoats, as sirens wail and a wintry dawn breaks. It could be just another lousy Monday morning in the office, but it's not.

WORDS AND PHOTOS (UNLESS OTHERWISE CREDITED) BY JOHN BIGGAR



John Biggar has been climbing, skiing and exploring in the Andes since the early 1990's, and has now skied over 100 different summits out there. Back home he is a Winter Mountaineering & Climbing Instructor based in southwest Scotland, a proprietor of the business 'ANDES' and is working his way through ski ascents of the munros.

E john@andes.org.uk www.andes.org.uk

This is South America. This is Santiago de Chile, and we're heading to the backcountry.

The Parque Bustamente tube station in Santiago is not very well designed for access with full skitouring kit. The steps are a bit too steep to walk down comfortably in ski boots, the escalators are tricky and the turnstiles are awkward to get past whilst juggling ski's, sticks, rucksack and goggles. It's very busy. We get some funny looks.

Santiago is probably the only city in the world where you can ski a 4,000m peak using the underground to start and finish. It doesn't make much sense of course, but circumstances led to us taking up this one day challenge. After an early breakfast we rode the tube for half an hour and then took a minibus to the ski-resort of La Parva. By half nine we had our lift tickets and were heading for the top of the four person Aguilas chair. By eleven we'd had a warm up run on the pistes and were skinning up towards the first col from the top of the chair. A long series of zig-zags took us onto the ridge of Cerro Parva, a 4,070m high summit overlooking the resort. It was hot work with the midday sun beating down from an azure sky but the snow stayed light

and consistent even early in the afternoon. The humidity is so low in most of the Andes that snow often sublimates rather than melting, keeping the snowpack relatively dry. We summitted to spectacular views out over the Pacific Ocean and down towards Santiago lurking in the smog 3,500m below. The ski down was great. We all put in some nice snaking turns before hitting the piste again at full speed and racing down to Don Luis's cafe for coffee and cake. After a few more runs on the pistes we made the long journey by bus and underground back to our Santiago hotel and a dinner of steaks and Chilean red wine.

Back in 1999 that day was one of my first experiences of ski-mountaineering in the Andes. Since then I have been back to ski or snowboard numerous times and explored a large part of the Andeand backcountry. From the high altitude peaks of Peru and Bolivia, through the classic high country around Santiago, the beautiful Chilean Lakes District and on southwards to the vast Patagonian ice-caps and high latitudes of Tierra del Fuego. Spread over thousands of kilometres from north to south it's not surprising there is a huge variety of skiing in the Andes, but here is a brief summary of what I have learned so far.

In the tropical areas of Bolivia and Peru the skiing is exclusively at high altitudes and on glaciers, with snow-lines typically at 4800m. This requires some hefty carrying of skis and boots and watching out for crevasses. However huge daily temperature variations, a very dry atmosphere and very strong equatorial sunshine make the snow very stable and skiable, and avalanches are rare.

The High Andes around Mendoza and





1. Carrying through a steep icy section on Volcan Villarrica. 2. The first ski descent of Volcan Domuyo, Argentine Patagonia, November 2006. 3. Base camp in the Khara Khota valley, Bolivia. 4. Skiing Sierra Nevada, Chilean Lakes District.





Santiago has always been popular with local climbers for skimountaineering and backcountry. The highest peaks (Aconcagua, etc.) rarely have good cover due to the continuous high winds, but many worthwhile tours and ascents can be done in the 2500-4000m range. Good areas with easier access on the Argentine side of the Andes include the Cordon del Plata, the Atuel valley and the Quebrada Matienzo by Puente del Inca. On the Chilean side there are fewer access roads but the Maipo valley above Baños Morales can be very good.

Further south are the areas of the Andes that receive significant winter snowfall. Valley-to-valley tours are possible here, but in many places the dense cool rainforests prevent access to the snow. The exception is where there are ski resorts. In the Andean Lakes district these are often built on the slopes of the active volcanoes. This region is one of the best for "holiday" ski-mountaineering, with ascents of 2500m-3000m peaks taking just one long day from a local town. In Chile the volcanoes Chillan, Antuco, Lonquimay, Llaima, Villarrica, Lanin and Osorno all make fine ascents. On the Argentine side the peaks are more remote, drier and higher, but there is no forest to fight with first. One of my favorite ski trips was making the first ski descent of Domuyo (4709m), the highest mountain in Patagonia, with a couple of clients in 2006. There are also good day trips and short tours in the peaks near Bariloche.

The Patagonian ice-caps provide one of the best opportunities for serious expeditionary ski-mountaineering in the Andes. Indeed skis are generally necessary to reach the more remote peaks. The scenery is absolutely out of this world. However there are disadvantages. Steep descents are few and far between, large loads will need to be carried or pulled using a pulk sled; there are serious navigational problems and some truly enormous crevasses. Oh yeah... and the weather can be truly appalling, often resulting in stormbound days in the tent.

Finally, just before Cape Horn, there is Tierra del Fuego where the skiing is damp, boggy and very Scottish and we got to see the Aurora Australis at night.

#### **FACTFILE**

#### Season

Bolivia and Peru are best in May and June, just at the end of their tropical wet season. I've skied in Chile and Argentina every month from July through to November. The best time for good spring snow is late September or early October. July and August can be very wintry, with high winds and ice-crusts being big issues. For the ice-caps in Patagonia, a bit later, e.g. October to December is recommended. Overall, snow cover in the temperate Andes is less reliable than in the classic northern hemisphere areas and some years can be very dry and high.

#### Weather

The weather gets worse the further south you go. Bolivia has an exemplary climate in the May and June when it is not unusual to have weeks of skiing without a single cloud. Around Santiago and Mendoza the weather is still way better than in the Alps. The Lakes district is generally good but with occasional days of very heavy rain. Further south, beyond 40°S, things get much less reliable and the ferocious winds are normally the biggest issue.

#### Guidebooks

The one I wrote is pretty good. Although it's not specifically a ski-touring guide, it does have information on ski ascents of all the best peaks. *The Andes, A Guide for Climbers*, 4th edition, John Biggar,

Paperback 978-0-9536087-4-4, E-book 978-0-9536087-5-1 Handbook of Ski Mountaineering in the Andes, Frederic Lana, 978-2-9529800-1-2

#### Travel

For all areas we usually hire a 4x4 vehicle, but there are areas where high clearance alone is OK. Vehicle hire isn't particularly cheap (£300-£400 per week) but it does mean you can make the best use of the weather. Check the condition of the vehicle carefully.

#### Accommodation

We usually use a mixture of mid-price hotel rooms and self-catering chalets, called 'cabañas', for about US\$30-50 per person per night. Staying in cabañas means you can make your own early breakfast, plus they have loads of space to dry and clean kit.



## The popularity of climbing in the UK is increasing, with growing numbers of predominantly indoor climbers seeking sunny sport climbing destinations, outdoor climbing tuition, and high-quality coaching.

WORDS AND PHOTOS (UNLESS OTHERWISE CREDITED) BY ESTHER FOSTER



Esther Foster is a freelance
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She teaches and coaches sport
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the UK, alongside trad climbing
and mountaineering work.

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Traditionally, our outdoor climbing qualifications have had little emphasis on sport climbing tuition, often holding a presumption that it is a fairly 'safe' aspect of our sport with little need for much thought. Having said that, most regular sport climbers have witnessed accidents, near misses and common errors at crags... and with large numbers of new indoor climbers venturing onto the sport crags, we have a responsibility to provide a high standard of instruction and thoroughly considered approaches.

This article aims to give guidance on teaching some of the technical aspects of sport climbing – namely pointers on threading lower offs and managing lead climbing. It should be of benefit to those who will be teaching and coaching sport climbing both indoors and outdoors, and also to those who sport climb for personal enjoyment and may not have always considered some of the subtleties in sport climbing safety.

#### **Threading lower offs - some key pointers**

The most common method when personally sport climbing is for people to clip in direct to the chains

from their harness with a quickdraw, or linked quickdraws. The advantage of this is that we can have less things attached to our harness when climbing at our limit; quickdraws work just fine, have often been left *in situ* for the send, and sport climbers like to climb light, with minimal loops and attachments hanging from their harnesses.

A disadvantage of this is that, despite our best efforts, students may still get confused as to which quickdraws are safe to remove when faced with a number of identical draws around them. They often find it all much scarier than when practising at ground level, and watching a nervous client fumble causes your heart rate to quickly rise as you realise you can't see exactly what they are doing up there!

Possible strategies for managing a smooth and safe transition to threading lower offs include the following:

• Clipping direct from the harness to the chains with a lanyard (clearly different to the quickdraws they will be removing first), reduces the chance of the new sport climber removing that item before they should. Teaching the climber to always weight the lanyard (even when standing on a ledge), makes it even more obvious that everything else should be removed, the rope tightened and everything double checked, only then removing the lanyard when the belayer is ready to lower. As the client progresses, be willing to explain





MAIN PHOTO Sport climbing in Thailand. © Alun Richardson. 1. Always ensure you know the length of your rope, the length of the route, have a knot tied in the end... and teach both belayer and climber to look down at the dead rope regularly when lowering. 2. Teach students to pre-clip the first or even second bolt to prevent a ground fall.

how and why experienced climbers often use quickdraws instead of a lanyard. Choosing a lanyard and understanding its pros and cons is detailed by Jim Walton in the Autumn 2017 issue of this magazine, which newer readers can find in the download section of the members' websites.

- Teaching threading anchors should be done on or very near the ground in a low-stress and low-risk environment. Indoor walls sometimes have practise lower-off chains near the ground. Outdoors, you could use some slings and karabiners to replicate a lower off. Alternatively, and much better, acquire a chain and rings you can take with you to practise at a crag. These can be attached to a tree, bag, strip of wood. Some crags, such as Horseshoe Quarry, have ground level lower-off stations or bolts specifically placed for practise.
- When teaching new sport climbers, choose routes with lower offs you can easily see from the ground, some instructors even carry binoculars!
- Progress gradually through the learning stages before allowing students to rig their own threaded lower off at the top of a climb.
   For novices, threading anchors can often be saved for a later session once they are more confident and experienced; lowering off quickdraws is quicker, and they can focus on checking the bolts and lead practise first.
- If clients are seconding the route, and unclipping on the way up before threading the lower off, ensure that the belayers rope is clipped in to at least one quickdraw beneath the lower off whilst the client threads the anchor point.
- Direct clients to watch a film about threading a lower-off in advance of meeting you, or for future refreshers.

- Lower offs vary in design, even at the same venue, easily knocking the confidence of a novice sport climber if they get to the top and haven't seen that type before. Equip your clients to manage these differences, namely threading a bight through a large ring versus untying and threading a single strand through small rings, or two bolts connected to a single point versus two separate rings which both need to be threaded. Photos and videos can be used to prepare or refresh a climber before they get to the top.
- To reduce the risk of the climber clipping that knot onto a karabiner which is on their nearest gear loop (it has been done!) recommend preplacing the screwgate on the belay loop, or store it towards the back of the harness. As the client progresses and can take in more information, you could also teach them to use back-to-back snapgates if they forget a karabiner.

Note: There have also been instances where the climber has tied a slip knot in to the karabiner on their harness rather than an overhand or figure of eight on the bight. Although rare, it's a risk to be aware of. Make sure the client is fully competent at tying the right knots every time before they go up there for real, and as a precaution you could teach them to tie a back-up knot in the tail end once it has been pulled through the anchor.

#### **Progressions for lead climbing**

To the outside observer it can appear that an instructor is doing little other than offering encouragement and occasional advice. But the reality should be constant consideration of what and when to teach each element, in order to develop a spiral of knowledge, skills and confidence on the journey through towards "unconscious competence".

Getting new sport climbers leading early on, on very easy, safe routes is great for building up confidence, preventing reliance on a tight bottom rope and building an ability and familiarity of climbing well on lead.

Here are some ways to enable a smooth progression in to lead climbing while reducing the risk of falls and over-anxious climbers:

Pre-clip the rope in to the first or second quickdraws

This lowers the chance of a ground fall, reduces client stress levels, and sets an example for them to consider protecting the bottom of their climbs once they become independent. Equip your clients with the skills to use a clip stick, encouraging their own risk awareness and management when independent. Even experienced climbers fall off the bottom few moves of easy routes occasionally!

#### Extend bolts, and add in trad gear between bolts

Clients will often be leading on easy, ledgy and/or slabby routes which can cause more injuries than when falling than on steeper, higher grades. Clients have come to you for a higher standard of care and safety than learning from their friends. 'Lacing' a route with lots of extra protection may seem strange, or overly protective to seasoned sport climbers, but here are some benefits:

- You reduce the chances of injuries while under your instruction.
- New leaders will climb faster as they are under less stress. They will
  get more leads done, more clipping practise in the day/course, and
  therefore more improvement.
- Closer clips means less chance for the clients to put their legs behind the rope.

#### Top rope the route first

The climber benefits from learning how to climb the route well; fluidly, relaxed and with good technique. Encourage the climber to find hands-off rests or restful positions at each bolt. When they then lead the route, it is much more likely to be an enjoyable and positive experience.

#### **Other considerations**

Climbers being lowered off the end of the rope

This does happen with both experienced and novice climbers alike, and should not be a topic 'breezed over' when instructing, especially when most UK climbers will be sport climbing abroad on longer routes at some point.

Common reasons: Borrowing someone else's rope, not reading the guidebook correctly, or out of date information in the guidebook. Belayers (and the climber being lowered) should be regularly looking down at the dead rope as they lower; it's easy to underplay the emphasis on this. Also important is to tie the rope to the bag or a put

a knot in the end of the rope, but never just assume that this is the case, especially when working in groups where ropes are shared.

#### Belayers giving hard catches

Dynamic belaying and catching/taking falls is enough for a whole other article, but in brief, without a dynamic catch the climber can be spun, inverted, slammed in to the wall, and easily injured. This is especially common with light or younger climbers. Hard catches are common from nervous belayers, heavier belayers catching smaller climbers, and trad climbers who never fall off and are rarely catching lead falls!

Practise, good tuition and awareness are key. Ensure good communication between partners, chatting over the route, where the biggest risks of falls are, any ledges, what the climber wants from the belayer, and so on.

#### **Summary**

Each of us instructing will be working within different contexts, ratios and locations. There's not always one size fits all, and working 1:1 with someone will enable much more focussed individual tuition than those delivering sport climbing instruction to larger groups year round. Regardless, you should know why you are doing something, invest the time and effort in to developing absolute best practise, and be willing to be challenged and change or improve your delivery over time.

There are numerous other aspects of sport climbing that could be covered here such as dynamic belaying, managing differing partner weights, stripping routes, orientation and style of quickdraws, bolt knowledge, sport climbing language, and the multiple applications for a clip stick. But hopefully the pointers covered here will be of use to anyone who sport climbs or will be teaching sport climbing.

#### Further learning and resources

- BMC TV (via YouTube) has a really good range of sport climbing skills videos.
- Rock and Sun have produced sport climbing YouTube skills videos that are useful for clients and instructors.
- The BMC has a great range of technical skills PDFs, including a good booklet on bolts (www.thebmc.co.uk/bolts-advice-guides).
- Read, watch and listen. Choose to spend time with high quality instructors and experienced climbers. Don't just adopt someone else's practise because they have been doing it a long time, but because you understand and agree with their approaches.

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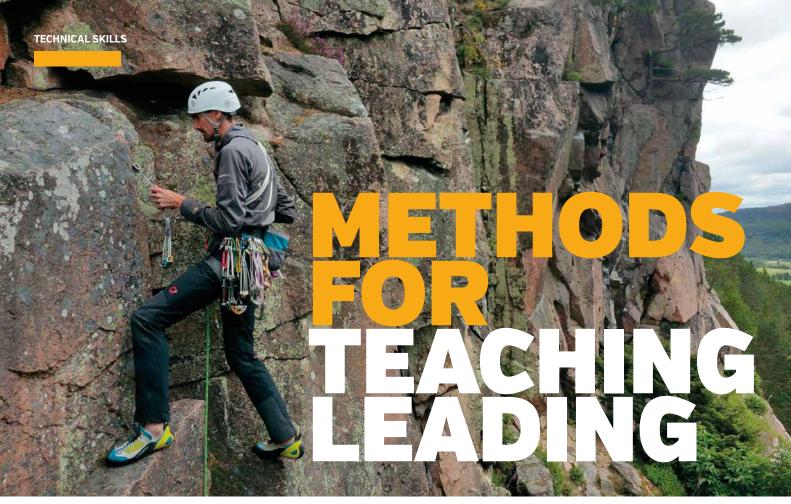
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On lead. © Glenmore Lodge.

With the recent addition of the Rock Climbing Development Instructor (RCDI) to the veritable smorgasbord of climbing and mountaineering qualifications, it seemed very timely to reflect on the selection of methods available for teaching leading and some of the associated pros and cons.

WORDS BY NATHAN WHITE



Nathan White, Instructor at Glenmore Lodge: Climbing is Nathan's passion. It has taken him to some amazing places, from alpinism in Alaska to Big walling in Yosemite. On these adventures Nathan has gained a wealth of knowledge which he enjoys sharing with others. He works full time, year round, across the UK as a climbing guide and coach, part of which is as a senior instructor at Glenmore Lodge (sportscotland's National outdoor training centre). Nathan lives in Aviemore with his family, where he gets the wonderful opportunity to introduce his son to an adventurous outdoor lifestyle.

Both Rock Climbing Development Instructors and Mountaineering and Climbing Instructors will be coaching people towards lead climbing; whether it is on trad or sport. So having a selection of coaching progressions to hand will allow you to more efficiently individualise your instruction to suit your client's needs.

Below is a list of teaching methods. This does not attempt to be a definitive guide, rather to showcase a selection of techniques that are at your disposal.

1 Workshops – Workshopping certain subjects can be very time efficient and taking the content out of a potentially serious environment can allow the clients to really focus on the task at hand. This then can be put in to context shortly after, for example learning to build belays in non-serious terrain e.g. bottom of the crag, then once the clients understand the mechanics, going to the top and putting it into practice with the added complexities associated with being on the top of a crag. The down side to this is you are compartmentalising the techniques, which some research suggests can inhibit the

- overall learning of the student. Also, if the subject is dwelled upon too long it can become a fairly inefficient way to teach and quite boring. After all they are here to go climbing.
- Walking traverse/ bouldering traverse whilst mock leading Whether your feet leave the ground or not, traversing whilst the clients mock lead can be used with those that are either not super fit and you want to manage fatigue, or with those struggling with some of the subject matter. This approach is easy to supervise and observe and at any point they can step off, giving the student plenty of head space to take in your instruction. However, at a busy crag it may not be the most polite technique to use as this will use up more terrain/ routes.
- **3** Bottom roping Once the clients have a clear picture of the stages involved, this can be an excellent way of consolidating the skills required and creating a larger awareness of the subject matter. For example, by getting the student to mock lead on a bottom rope (sometimes called "ghost roping") they can explore spacing of protection, run-outs and falling off without

the potential seriousness of actually falling. You can either hang next to them and coach gear placement and clipping whilst they trail a rope and your other client belays, or you belay the bottom rope whilst the second belays on the lead rope. Alternatively, this system can be used for one-to-one work, with the "lead" rope simply trailing.

- 4 Seconding/ climbing in parallel Getting mileage seconding routes is an excellent way for your clients to observe the process and engage with the steps they will need to learn to become proficient leaders. It is also a great way to get loads of mileage. The key is to provide structured tasks and coach during the seconding process. Done proficiently, clients can learn many of the mechanics of lead climbing while following pitches.
- 5 Climbing in series another form of "ghost-roping". The instructor leads the climb, belayed by client 1. Client 1 seconds the route being belayed by client 2 on an additional rope. The additional rope that client 1 is trailing gives them the opportunity to mimic leading, unclipping the top rope and clipping the rope from below into the protection. This technique not only allows the middle climber (client 1) to go through the seconding process but also mimic leading. You can then get client 1 to build their own belay and then belay up client 2 who seconds and strips the route. As a process it is very complete for both students and you can fit a lot into a short period of time. The challenge comes from balancing the appropriate amount of learning with the amount of climbing they get done. The more you teach the slower the process takes.
- 6 Head-pointing Pre-practising whether it be the route, gear placement or even the belay building, provides the opportunity to increase the certainty, and can be a very rewarding experience for both novice and expert alike. This strategy can be a great way for the instructor to relinquish some power and yet maintain some form of control of the system. This also empowers the client fully on the ascent, giving them a real sense of autonomy and control of their own destiny. It can also be a great way to introduce someone to leading who wants to lead but is struggling with the psychological stress of the sharp end.
- 7 Preplacing gear (pink point) Similar to the above, but even more progressive with some/all protection in place ready to be clipped. Its a good way to introduce style and ethics of our quirky sport too. The students get to experience what it is like being on the sharp end, but with very minimal decision making. Therefore, it's much easier to let them off the leash, but you can very much stay in control. As with headpointing it's important to be prepared for the unexpected, as the student will be leading beyond gear so a leader fall is a genuine possibility.

This is not an exhaustive list but hopefully it will act as a reminder of the selection of techniques we have at our disposal and maybe next time tempt you into trying something different. Ultimately, like many other aspects of our profession it all comes down to managing risk, reward and the learning progression. Just like a good chef picks the ideal ingredients to produce a perfectly balanced dish, we too have to choose the correct ingredients – the learning environment, level of challenge, what we coach and how we coach. Get this concoction right and you have a recipe made in heaven. Get it wrong and you could ruin your student's future appetite for the sport. So it is down to us as the Instructor, Coach or Guide to individualise the experience and rise to the challenge.



#### **TECHNICAL SKILLS**













1. Clutch hoisting. 2-5. Clutch step. 6. Variation version. © Steve Long.

## The Alpine Clutch

Sometimes called the Garda Hitch this appears to have fallen out of favour in recent times, so I thought it was time to reappraise the value of this technique.

WORDS AND PHOTOS (UNLESS OTHERWISE CREDITED) BY MALCOLM CREASEY

Sometimes called the Garda Hitch this appears to have fallen out of favour in recent times, so I thought it was time to reappraise the value of this technique. In simple terms this is a one-way clutch system allowing the rope to move easily in one direction through a pair of D-shaped screw gate karabiners yet will lock once the system is loaded.

Let me say at the outset this is in not going to compete with purpose-made traction devices and is very much an improvised setup for use in emergencies. It can offer some great advantages in some situations but in easier angled terrain it can be worse than useless.

It is important to note the Alpine Clutch is similar to the Direct Belay in that if it goes wrong, it can be spectacular and potentially disastrous so don't attempt to make it up as you go along when things go pear-shaped, play with it in a safe – non serious situation first!

As a one-way clutch its main uses are either sack hauling or in an improvised rescue situation where getting someone up, rather than using gravity to go down is the only option, such as on sea cliffs. It can be used as part of a Z-hoist system but it adds significantly more friction than a pulley or even a karabiner-prusik combination.

Ideally, both the karabiners should be identical, there are some which are compatible, and the clutch will work perfectly well but if you get this wrong – it could have serious consequences. So, getting to know your rack and seeing what works and what doesn't is key.

Lay the karabiners side by side with both gates to the front where they can easily be accessed. A sling should then be larks-footed around the top (hinged) end of the karabiners – this is not essential, however it prevents the karabiners from moving around and keeps the whole system snug. Take the hauling rope through both karabiners and back around the first karabiner and then snug against the back bar. The rope should move freely one way and not the other, because once loaded the karabiners are pinched together, trapping the rope.

As a hauling, or improvised rescue it is worth noting there is no mechanical advantage like there is with a pulley system, so don't try this on 80 - 100 kilo's – you'll do yourself a mischief! Be warned though, one of the drawbacks of this system is that it cannot be released under load!

Ideally, steep terrain, a high anchor point and a narrow stance are where this will work best, oh and a light and skinny partner – and ideally you are blessed with big muscular legs!

Simply set the clutch as high as you can – but within reach, allow yourself a little movement (whilst remaining belayed) put a prussik (or mechanical clamp) on the haul rope and attach to the belay loop on your harness, squat down with your back to the drop, astride the haul rope and slide the prussik down as far as you can. Now simply stand up and pull the 'tail' of the rope through the clutch and repeat the process. The tail of the rope should be backed up periodically but personally I would never use this method over a protracted distance! It's much better in my view for a short, sharp hoist over a couple of metres maximum – unless you are just sack hauling.

The one advantage this method can have is that unlike pulley systems pulling one metre of rope through the clutch means the sack (casualty) is one metre higher, as it is a direct pull and not running through a pulley system, which often require three metres of rope gain for the load raised by one metre.

I have used this method and it does work very well in the situation I have described above, however it does require a specific set of circumstances: so low anchors, big stances and slabby ground are not conducive to getting the best out of this system. As an old friend of mine used to say, it is just another spanner in the toolbox – as with all improvisation – if it's not working as you want it to try something else.

A fairly recent development that may well bring this system back into favour, is a variation version that works with any combination of karabiner shapes. I've included a photo showing the variation system in use: I'll leave you to work out a technique for threading or clipping the rope into place!

And before anyone says it – yes – my legs are built for hauling, not for being hauled! ■



Malcolm Creasey is a former Technical Officer for Mountain Training, and now works as a freelance Guide and Mountaineering & Climbing Instructor based in North Wales. He has over 30 Alpine and Scottish Winter seasons to his credit. He is still keen to get out and about before the body seizes up completely. Although now a 'retired' Guide he is still a member of AMI and can be persuaded to do the occasional day on the hill or advisory work. E malcolmcreasey@btinternet.com





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A three-part series exploring flower families

## WHO'S INYOUR FAMILY TREE?

WORDS AND PHOTOS BY JIM LANGLEY

You will all be familiar with the common daisy but did you know it belongs to the largest plant family? Not only that, it is also one of the most advanced flower families in evolutionary terms as well.

The Daisy family (also called *Asteraceae* or *Compositae*) is composed of an estimated 23,000 species most of which are herbs but some shrubs and tree exist too. Several of the species have become important food crops such as lettuce, artichoke and chicory with others being significant ornamental plants such as marigold and chrysanthemum. Sunflowers are commercially significant for their oil and seeds whilst chamomile is made into a soothing herbal tea and echinacea is grown for its medicinal properties.

The earliest records of the family are distinct pollen grains found in sediments in Antarctica that date from the Late Cretaceous era about 70 million years ago. The family is regarded as one of the most influential in that many animals, such as bees, wasps and hummingbirds heavily depend on their flowers and nectar to survive. The name of the family – *Asteraceae* – comes from Greek meaning star and refers to the star-like shape of the flower. A common phenomenon amongst the many species is that their flowers are 'heliotropic' meaning they move to track the sun's path, maximising absorption of the sun's energy.

#### **Flowers**

From what first seems at first to be a single large flower with enlarged outer petals is actually a dense head of tiny flowers forming a central disc with outer sunray flowers of many smaller flowers. The tiny flowers are termed florets and are either central 'disc florets' or outer 'ray florets'. Plants of the Daisy family will either have disc florets or ray florets or both types. The diagrams opposite illustrate the structure of the flowerhead.

#### Leaves and branches

The leaves are mostly simple but can also be deeply lobed and spiny (as with the thistles). The leaves can be arranged alternately, opposite or in whorls (ring of leaves) along the stem. The stems of some species also contain secretory canals containing resin or the milky fluid latex.

#### **Fruits**

The fruits and seeds of these plants are quite well known as they are often winged or spiny. You may have blown the seeds from a dandelion head as a child in a game of 'she loves me, she loves me not'





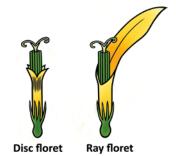












or had the hooked seeds of burdock entangle in your jumper whilst walking too close to the plant. Sunflower seeds demonstrate the tightly packed nature of the flowerhead but have you noticed the way they are packed? The spiral patterns they form fit into a mathematical sequence coined by Fibonacci.

Below are a few of the plants in this group that are found across the European continent and British Isles and one from East Africa.

#### Yarrow (Achillea millefolium)

A common grassland plant which grows to about 50cm. It is a strong-smelling plant with clusters of white (or pink), flat-topped flowerheads. The flowers can be seen from June until November. Its leaves are finely divided and look like green feathers. The plant is named after the Greek hero Achilles who is supposed to have used the plant to treat the wounds of his soldiers. Yarrow is also used in a host of remedies, from treating colds and fever, stomach ulcers and rheumatism.

#### Dandelion (Taraxacum officinale)

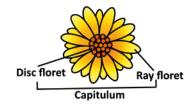
A very common plant with a yellow flowerhead and considered a weed by many gardeners. The flowers turn into a fluffy, white, seed globe and can be seen carpeting meadows. Each seed is like a miniature parachute and uses the wind to aid dispersal. The leaves have jagged lobes giving the appearance of lion's teeth. In French this translates as 'dent-de-lion' and provides our common name dandelion). It is also known as 'wet-the-bed' indicating its diuretic qualities when eaten.

#### Alpine Aster (Aster alpinus)

This flower can be seen in rocky grasslands, usually on limestone. It has a wide distribution being found across North America to Europe and Siberia, yet not in the British Isles. It has a solitary flowerhead of violet-blue, mauve or sometimes white with a yellow central disc. Although not a common alpine plant it can be seen growing at an altitude of over 3000m.

#### Daisy (Bellis perennis)

The name daisy comes from old English meaning 'day's eye'. Its flowers open at dawn and track the sun's path across the sky until dusk when they slowly close. It has white outer rays, often tipped red, with a yellow central disc. It is found throughout the British Isles, mainland Europe and also over in North America. They flower from early spring right through into autumn. Its young leaves can be eaten as a salad green. It's also a little known fact that daisies are anti-inflammatory so are good for bruises, aches and sprains.



MAIN PHOTO Alpine Aster. 1. Daisy. 2. Yarrow. 3. Edelweiss. 4. Mountain Everlasting. 5. Dandelion. 6. Ground Groundsel. 7. Alpine Sow-thistle.



Jim Langley runs Nature's Work, an educational consultancy specialising in outdoor learning. He is an International Mountain Leader and runs CPD workshops for the Mountain Training Association and the outdoor industry.

#### **OUR PLANET**







This is another plant restricted to the alpine regions of central and southern Europe. Its large, silvery flowerhead is sat directly on a rosette of spiny leaves. It is a common sight being found up to an altitude of 2,800m. Its flowers close in wet weather to protect the pollen, a phenomenon folklore holds to foretell bad weather.

#### Alpine Sow-thistle (Cicerbita alpina)

A large, bushy plant easily spotted in open woodlands and tall alpine meadows. Its British distribution is restricted to a few sites in Scotland but is found across northern Europe and the Alps. Its blue-violet flowers form loose clusters at the top of solitary stems. The lower leaves are large and triangular resembling lettuce leaves and are sometimes eaten raw or cooked. The shoots can also be eaten and are a favourite food of the Eurasian brown bear.

#### Giant Groundsel (Dendrosenecio kilimaniari)

As its name suggests this is a giant plant native to East Africa. Its distribution is restricted to a high altitude zone above the treeline, around 4,300-5000m, on mount Kilimanjaro. Its seeds do not spread far hence its incredibly localised distribution. It is one of 11 members of the sub group all of which are located in the same geographic region but on separate, isolated mountains. It has massive leaf rosettes on each woody branch and is able to store water in the thick stem. Each branch takes about 25 years to form so counting them will give an estimate of the plants age.



#### Edelweiss (Leontopodium alpinum)

The iconic plant of the Alps which symbolises pure love and worthiness. It also conjures up images of alpine meadows and the stories of the Swiss mountain girl Heidi. Edelweiss can be seen on mainly rocky limestone grasslands up to an altitude of 3400m. Its species name originates from the Greek meaning 'lion's foot'. The compact flowerhead comprises several yellowish-white flowers which are surrounded by conspicuous large, woolly, grey-white modified leaves (bracts).

#### Arnica (Arnica montana)

A well-known medicinal plant used in the treatment of sprains and bruises. Arnica is indigenous to central Europe and found in alpine meadows. It has large, bright yellow flowerheads with long spreading ray florets and can be seen flowering between May and August. It can be distinguished from similar species as it has a pair of stem leaves which are opposite each other.

#### Mountain Everlasting (Antennaria dioica)

This little plant thrives in dry conditions so is well adapted to rocky heath and dry meadows on acid soils. It produces rooting runners and forms mats of grey-green leaf rosettes. Its leaves are superbly adapted to conserve moisture. They roll inwards in dry conditions exposing the woolly hairs of the leaf underside which also aids water retention. Its flowerheads are either white or pink depending on their sex (white – male, pink – female), and appear on separate plants. It is an alpine plant and found across the British Isles (but not common) and through the Alps.



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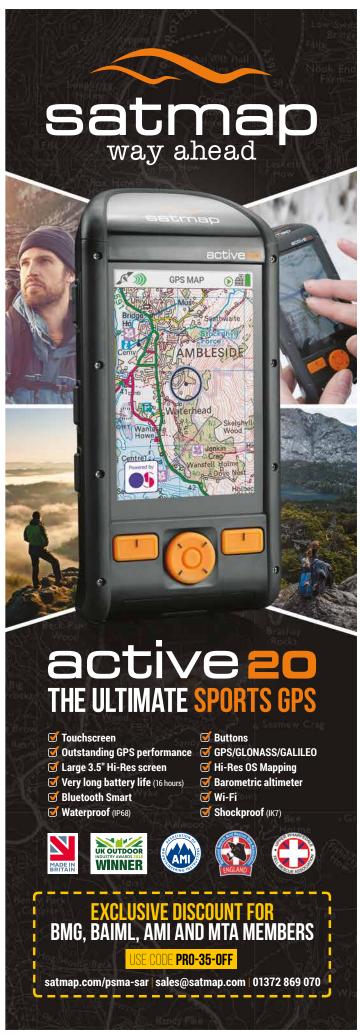
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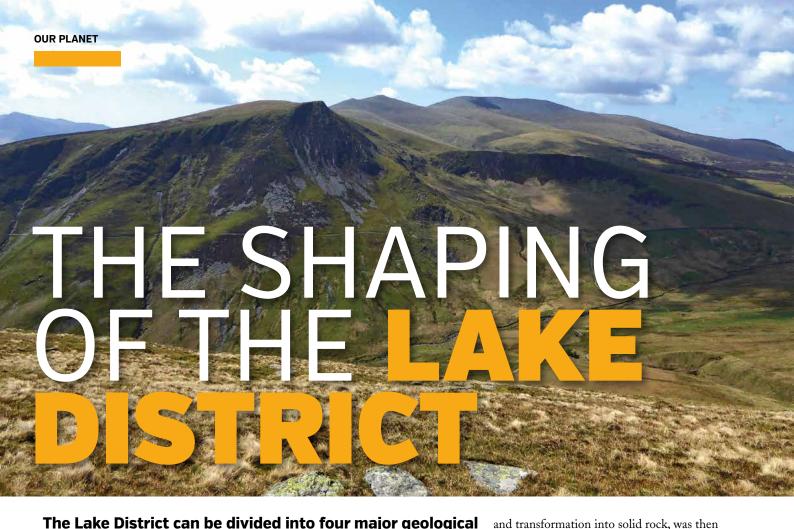












The Lake District can be divided into four major geological areas, three of which form the majority of the fells which we love to walk and climb. These are, from north to south and from older to younger, the Skiddaw Group, the Lower Borrowdale Volcanic Group, the Upper Borrowdale Volcanic Group, and the Southern Fells.

WORDS AND PHOTOS BY PAUL GANNON

The Skiddaw Group forms the northern fells, including Skiddaw and Blencathra (*Main photo*), but also such fells further west as Grizedale Pike and Grasmoor. The whole group is formed from what were originally 'sedimentary' rocks which were then subject to high pressure and 'metamorphosed' to some extent (during the mountain-building episode mentioned below). These form mainly sinuously curved fells which offer fine walking routes and some stunning viewpoints, with the exception of a few places such as Sharp Edge which offer little scrambling and mountaineering challenges.

Sedimentary rocks are formed from material eroded from previously existing highlands which is then carried downhill by streams and rivers to be dumped as sediment in lakes, lowland and coastal rivers, and seas. Then, over thousands of years (so quite quickly in geological terms), the loose sediment cements together to form hard rocks such as sandstone and mudstone (depending on the size of the sedimentary particles). In the case of the Skiddaw Group rocks, this process of sedimentation and solid-rock formation (known as 'lithification') occurred around 500 million years ago on the western edge of part of the ancient proto-European continent.

This process of erosion, dumping as sediment

dramatic events took place. The proto-European continent and the proto-North American continents were driven by the processes of plate tectonics towards one another. This squeezed the oceanic plate that separated the two continents. This in turn forced the oceanic plate underneath the continental plate (a process known as 'subduction'). This in its turn led to the formation of a series of volcanoes over a period of about 5 to 10 million years.

Initially, the volcanoes were of the type that

interrupted about 450 million years ago as some

Initially, the volcanoes were of the type that produced vast quantities of lava which poured out of volcanic vents on comparatively low 'shield volcanoes' (and not the classic steep-sided cone volcano). There were plenty of such volcanic vents (not just one mega-volcano) but it is no longer clear where these vents were located as so much material has in the intervening millions of years been eroded away. This is the Lower Borrowdale Volcanic Group (lower thus older). I'll use Bleaberry Fell as the exemplar of this landscape (*Photo 1*).

These lava areas are probably the least popular fells of the Lake District, forming lowish hills covered with tough terrain and smothered by dense, unwelcoming vegetation. These fells form a narrow band just south of the Skiddaw Group, running from the north-east (north of Ullswater), east and south of Derwentwater, and then, in a thicker band, west of Great Gable and Scafell Pike to Harter Fell (this western stretch also contains swathes of 'granite' which was formed low down under the surface by melted rock slowly cooling and then rising to the surface over millennia).



Paul Gannon is the author of Rock Trails Peak District and other geology guidebooks for hillwalkers. He is a member of the Mountain Training Association and also runs geology CPD workshops in the Lake District and Snowdonia for the Associations.



MAIN PHOTO The sinuous sedimentary curves of Skiddaw seen from Blencathra. 1. The tough terrain of the lava landscape of Bleaberry Fell. 2. The knobbly topography of the pyroclastic rocks of (left to right) the Langdale Pikes, Pike o'Blisco, and Crinkle Crags.

We then come to the Central fells area, encompassing many of the iconic peaks such as High Street, Helvellyn, the Langdale Pikes, Crinkle Crags, Bowfell, Great Gable, Scafell Pike, the Old Man of Coniston and many others. Here we find often very rocky peaks and landscapes that are celebrated for their stark scenery as well as for challenging walking, scrambling and climbing (*Photo 2*).

This is the Upper Borrowdale Volcanic Group (upper and thus younger) and these rocks were produced by a different type of volcano to the lava dominated Lower Borrowdale Volcanic Group. These were predominantly what are known as 'pyroclastic' or explosive eruptions, where great clouds of incandescent fragments were erupted, often forming great depressions known as 'calderas' up to 10 kilometres in diameter.

Once again, there were many volcanic vents for these eruptions though very few actual locations have been identified. What we do know is that they produce very resistant rocks and often very knobbly topography (a fancy term for landscape).

After the volcanic phase, the Lake District was briefly submerged beneath the seas before even more drama affected the area. This fairly brief period resulted in the creation of more sedimentary rocks, the Southern Fells which we will conveniently jump over to get to the next event.

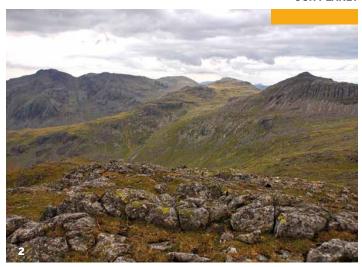
This occurred when the ocean had been fully subducted away and the two continents, proto-Europe and proto-North America, collided. Subduction ceased and the two continents piled into one another forcing them up into a great mountain range (at least as high as the Alps, maybe as high as the Himalaya).

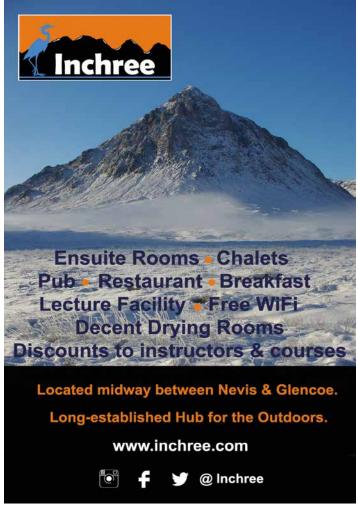
This collision lasted some 50 million years and produced the Caledonides range that included the Scottish Highlands, Snowdonia, some of the Irish mountains, and, incredibly, the Appalachians of North America.

Since about 350 million years ago the story has been one of erosion, with the mountains of the Lake District being cut down to their present status of the remaining stumps of a once majestic mountain range (wonderfully pretty stumps though, one must add).

One final set of processes needs to be mentioned. At some point in the last tens of millions of years the area was compressed and the gorgeous stumps were pushed up into a sort of dome shape. This then created the near radial drainage pattern (the eastern part of the Lake District doesn't have a radial pattern of rivers) which was then eroded by ice into the great valleys and the stupendous lakes over the last 2.4 million years.

The ebbs and flows of eruption and erosion has all the drama of an historical epic! Who knows what the unfolding future holds for this magnificent landscape?









ABOVE Peregrine falcon. © BTO/John Harding.

#### **Vital Statistics**

Length: 42cm. Wing-span: 102cm. Weight: Male 670g, Female 1.1kg

Habitat: Open terrain for hunting; cliffs, crags and latterly tall man-made structures for breeding.

Food: Predominantly birds, mostly taken in flight sometimes after a spectacular stoop in which the peregrine can exceed 150mph.

voice: Noisy at or near the nest but generally quiet elsewhere. Harsh, chattering staccato note repeated rapidly. This is also a typical response to disturbance

As for many of our birds of prey it was tough times for the peregrine in the nineteenth and twentieth centuries through persecution in the name of game protection. In addition to this it had the dubious honour of being singled out by the government when it issued a 'Destruction of Peregrine Falcon Order' in 1940. This was implemented through a cull by the Air Ministry. This is all rather baffling until you remember how homing pigeons were used as message carriers in the Second World War. Pigeon breeders supplied 200,000 pigeons to the armed services and peregrine falcons are remarkably adept predators of birds in flight. This led to as many as 600 peregrine being killed and nests were also raided. In some areas, such as Devon and Cornwall, few birds remained but populations began to recover when the order was lifted.

Not for long though; in the 1950s and '60s the population crashed to 40% of pre-World War II levels. Man was the unwitting cause this time, organochlorine pesticides were used as seed-dressings. The chemicals persisted and built up in the bodies of seed-eating birds which, in turn, were eaten by birds of prey such as the peregrine falcon. A classic example of toxins being concentrated up through a food chain. As well as the direct fatal impact on adults, the chemicals caused survivors to produce easily damaged thin-

shelled eggs and breeding success plummeted.

What next on this roller-coaster ride? Once the pesticides were withdrawn, populations began to recover. The most recent survey in 2014 estimated the breeding population of peregrines in the UK, Isle of Man and Channel Islands to be 1,769 pairs. That was 22% larger than the previous population estimate twelve years earlier. It's a bitter-sweet tale though, most of the increases were in lowland England whereas populations in some upland areas have declined... the reasons for which are thought to include illegal killing and deliberate disturbance.

- **Q** What can you do for peregrine?
- A When planning a climb check the BMC's Regional Access Database www.thebmc.co.uk/modules/RAD/ or Mountaineering Scotland's Nesting Bird Updates www.mountaineering.scot/campaigns/safeguarding-access/birds-and-nesting.
- Q What can peregrine do for you?
- A Add a 'Wow!' factor to your day who isn't impressed by this stunning bird, the fastest in the world!



**Sue Haysom** is a professional ecologist, Mountain Leader and member of MTA. Sue is the owner of Greyhen Adventures.

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# An introduction in plain English: we keep hearing about it, but what does it actually mean? CARE77 ±1

WORDS BY MATTHEW DAVIES

For the previous two editions of *The Professional Mountaineer*, I penned articles covering *Organisational Risk Management (protecting your business)* and *Risk Management considerations for those planning overseas expeditions and adventures*. This article continues the overseas adventure travel theme (given that it is prime expedition season whilst writing), but the concepts are equally applicable to the UK.

Arising from both articles is the widely used 'Duty of Care' concept – often incorrectly used. Last week I saw an article with an individual who had faced a security situation in their own time and unrelated to work. This was a "high net worth" individual and a question was asked by a commentator as to where the duty of care was – i.e. suggesting that this particular individual should have been protected by their employer.

At the moment, it is hard to open a safety (or particularly business travel) related article without seeing an article by an 'expert' seeking to sell a product or service, suggesting, whether overtly or by implication, that this is essential to comply with your, or your employer's 'Duty of Care' for customers and staff travelling overseas.

'Duty of Care' is being utilised as a (powerful) tool to market services and products, but what is it and do you need that latest gadget or service? How far does your obligation go? The answer is that "it depends". Awareness of the issue is an important starting point: at University, this subject would take a term – it's complicated!

Complying with your Duty of Care goes a long way towards protecting your business and yourself, from claims, bad PR, increased insurance premiums and the very tangible and destructive aftermath of an incident (and ensuing litigation or prosecutions). Breach of your Duty of care may (see below) have civil or criminal consequences.

This article is intended for those new to the concept of 'Duty of Care'. There are a surprising number of organisations and businesses who have little or no knowledge in this area (including some offering their services as a 'Duty of Care" solution), of their obligations or the extent of the steps they should take to protect their customers and staff. For the seasoned experts whose systems are excellent, you may decide not to read on. Your call.

What follows is a brief and, hopefully, plain English explanation of the concept of Duty of Care at least as it exists in most Common Law countries (UK, Canada, US, Australia, New Zealand etc). I have taken liberties and simplified some issues to foster understanding at awareness level. It is intentionally not technical or legalistic (beyond

what it needs to be). Strictures on the word count limit wider consideration. It is not legal advice, but an academic discussion, with practical focus.

#### What is 'Duty of Care"?

In the UK, Laws that organisations and individuals need to comply with are set out by way of legislation, (Acts of Parliament), regulations and similar legal requirements from on high.

A duty of care can be owed in a number of ways including under statute, common law or contract.

Negligence is a common law legal concept.

'Duty of Care" is just one element of the Common Law concept of Negligence.

This concept operates, in one form or another, in many Common Law countries and the concept is one understood, and present, even more widely.

Negligence is a term widely understood amongst non-lawyers, certainly in Common Law Jurisdictions where it has been a feature of legal systems for a very long time – as the Tort (wrong) of Negligence.

A simple definition would be 'Failing to take proper care over something'. This begs the question of who is failing to take such care and what is "proper care" and of whom?

The definition of negligence assists understanding greatly. Negligence requires the following:

- · A Duty of Care owed by one party to another
- · A breach of that Duty of Care
- Damage arising from the breach of Duty (i.e. not for some unrelated reason).

#### **Duty of Care**

Whether a Duty of Care exists between two parties depends on the relationship between them, a concept in law known as the neighbour principle or proximity principle. Is the relationship sufficiently close

that one party should owe the other a duty of care?

An important factor is also whether it would be just and reasonable to impose a duty of care between the parties.

In simple terms, whether one party owes another duty of care is a legal issue. It is not a difficult concept (but sees numerous court cases every year). In over 20 or so years of lecturing on the subject, I am always struck by how well this is understood – because it reflects the morals of society. I always pose a series of questions to the audience and 99% of the audience will correctly identify where a Duty of Care exists.

A customer and service provider (outdoor instructor, expedition leader etc.) is one obvious arrangement where the contract between them (or the organization the instructor works for) generates a Duty of Care.

The extent of the duty is a trickier issue. What does it cover?

#### The scope of the duty of care

This is very often the legal battleground, rather than whether a Duty exists – establishing what the duty actually is in any given circumstance – and, importantly, the scope of that duty. Duties are qualified – requiring reasonable steps to keep the person to whom you owe a duty reasonably safe – it's not a duty to keep everyone absolutely safe.

Remember that other obligations may also apply in parallel under other legal vehicles.

#### The standard of care (i.e. what is "proper care") in our earlier definition

Standards of care may be established by statute in some instances or may be influenced by such things as safety standards.

The basic test in Common Law is whether the person or organisation owing a duty of care discharged their duty of care to the standard of the 'reasonably prudent/ competent XXX i.e. the reasonably prudent/competent employer, first aider, expedition leader and so forth.

Whether someone performed their duty to the standard of the reasonably competent expedition leader for example, will be decided by a Judge, in court, based on evidence provided by expert witnesses. This is where 'good practice', industry standards and qualifications come in.

Did the adventure travel company operate to the standard of the reasonably prudent/competent expedition company? Having evidence from expert witnesses will assist. What does the rest of the sector do? British Standard BS:8848 is likely to be referenced (a document that many leading experts in the overseas field work, adventure travel, expedition and visits sector devised – and sets out what is essentially "good practice". You don't need to comply with the standard, it's not compulsory, but given it reflects "good practice", it may be unwise to fail to either comply – or to meet the requirements by some other means. It essentially reflects what experts in the field believe the reasonably prudent/competent "venture" organiser should be doing. The standard has even been referenced in court cases overseas, outside this jurisdiction.

So, what other, competent organisations and bodies are doing, does matter.

This is where the importance of keeping abreast of developments in operating procedure, kit, technology and standards comes in.

I am aware of cases where there have been fatalities overseas and the Coroner in the country in question has criticised the company at the centre of the case, for not having suitable communications technology that worked in the area in question. A faster response may have (highly likely) changed the ultimate outcome.

Do all companies sending staff overseas track the movements of those staff members? No, they don't. Should they? There are benefits... and there are many references and standards suggesting just that. Has the tipping point been reached where a company would be negligent for not doing so? The answer depends on the industry, context and risk profile of the country and activity being undertaken. An NGO sending aid workers to a hostile environment is a different scenario than a business traveller going to Paris for a meeting. For a standard business trip, the answer is probably no. Knowing itineraries, having a mobile phone number, alternative contact numbers and having trained and briefed staff will probably suffice... at the moment. My point is that things change, technology moves on, costs come down and standards move and change.

An expedition company running an overseas expedition would be expected, these days, to have some sort of communication that functions. In the past, a runner would be used, then radios came in (and may still be appropriate in many areas), but satellite phones and satellite communicators are now affordable (not cheap but affordable and can be rented). Several cases have featured lack of suitable communications.

Take a look at what the BS:8848 standard says about communications systems in the field for overseas ventures and fieldwork – it may be an eye-opening read for some.

I keep referring to the adventure travel sector as I am a firm believer that both the adventure travel and extractive sectors have led the way (themselves following military technology that became civilianised and cheaper – much in the same way that tourniquets and haemostatic agents became mainstream from military medicine to those operating in the outdoors and now even taught on first aid at work courses for urban use). As these companies have led the way, the technology and policies have become mainstream and smaller, cheaper devices have blossomed.

Therefore, the criticism that may be levelled by a Coroner for failing to keep up with the rest of the sector (i.e. what the reasonably competent XXX does, changes over time with new developments).

Times, they are a changing. Move with them!

In the next issue we will examine examples of the ways that Duty of Care has evolved and is continuing to evolve, and consider the repercussions for our profession.



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## DEVELOPING SKILL TOO HARD FOR GEORGE SMITH?



#### **Development of perception-action coupling**

WORDS BY MARIANNE AND SAM DAVIES. PHOTOS BY DANE EHM.

Winters in Llanberis (North Wales) can feel a bit like living in Mordor. Steep mountains hide the weak winter sun and the scars left by the slate quarries add to a landscape of stark desolation. So, like many of the local climbers, my winter evenings were often spent at the Beacon Climbing Centre in the bright, vibrant and social space of their indoor walls.

One evening at the Beacon, I bumped into an old friend and university colleague. While we chatted, he asked what boulder problem I was working on. I happily showed him a very balancy, slightly crouched traverse, with small holds. My friend had a go, but was very disheartened when he could not pull onto the first move. He laughed. Then said that it was so frustrating that despite being able to climb multiple grades harder that I could on any rock or ice outside, there was no chance that he would ever be able to do this particular boulder problem. He was a British Mountain Guide and very proficient rock climber, but for him this was a rare visit to the wall and he was there to lead climb with an old friend. He concluded that he was too tall to squish into the space and not flexible enough to make the moves.

Then he told me a great story. He asked

if I remembered Crooky (Martin Crook) from our time at university. Of course, who forgets Crooky? Well, Crooky climbed a lot with his friend Big George (Smith). Although both brilliant climbers, Crooky would often spend ages working routes, then George would have a go and cruise them. Because George was so tall, he could reach extra holds and often miss out crux moves. Then, in 1994, Crooky put up a short route with sketchy gear (now a popular high-ball boulder problem). The route, on Craig Fawr in North Wales, is described as simply 'a striking finger crack,' but is in fact a very thin, striking finger crack. So thin, that when Big George first tried it, he couldn't fit his fingers in it. As a jest, Jim Perrin then persuaded a gleeful Crooky to name the climb 'Too hard for George Smith!'

My friend said the story highlighted how much climbing was influenced by the movement opportunities made possible (afforded) by different physical attributes, like height, strength and flexibility. Routes, he told me, present different opportunities (affordances) to different people. He couldn't do my boulder problem because he was not flexible enough, and too tall. However, I was not entirely convinced. It was a good

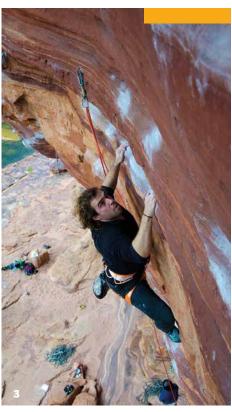
story, but not the whole story. Of course our physical attributes are very influential, but how often are they as absolute as the case of George's big fingers? A lifetime of guiding and climbing risky routes with high consequences develops very different awareness to affordances (perception-action coupling) than working boulder problems in a warm, bright and safe indoor wall. And my friend did not boulder, he never had.

In part 2, we described working a boulder problem as practice that necessitates spending a lot of time in the 'ugly zone' of developing movement patterns. Trying, failing, exploring, failing again, until the rock becomes intimately known. Adam Ondra, commenting on his training schedule (in July 2018), said: "Training for climbing should most of all consist of climbing itself... In bouldering, it is the freest as it is simply about figuring out the craziest moves, learning new movement patterns, sometimes with a training partner as well."

In traditional climbing, this is not the case. The affordances are very different, leading to a different style of practice. Serious consequences and high levels of risk mean that the development of perceptionaction coupling is more about the wider







MAIN PHOTO Nathaniel Fuller controlling the fear on the the lead at West Cape Howe, Western Australia. 1. Karina White showing that girls can climb powerful routes on Fck the Law (25), Kalbarri, Western Australia. 2. Graeme Russell showing that age doesn't matter on the thin crux of Sweet Pea (27), Boya, Western Australia. 3. Michael Blowers readying himself for the reachy and awkward crux of Super Funky (25), Kalbarri, Western Australia.

perceptual field and decision making, rather than pulling 'crazy moves.' Reading subtle nuances in the weather, rock and ice features, environmental stability, gear placements, and analysing cumulative risk. Each move is only made once, not explored, pushed to fail, or repeated.

Practice in this environment leads to the development of different perception-action coupling, hence my inability to climb as skilfully on trad routes. Outside, I was not as experienced or skilful as him. When leading I was very happy, comfortable being in control, confident in my attunement to the wider environment and making decisions in complex situations. But seconding was another matter altogether. After some early bad experiences, I could get stuck trying to make simple moves on relatively easy grades, due to an irrational lack of confidence in someone else's leading. This changed my ability to perceive and utilise the affordances normally available to me. I decided that just as I could become more skilled at trad climbing by practicing in higher anxiety contexts, it would have been possible for my friend to climb my boulder problem. He just needed to spend some time loosening up his knees, being out-of-balance, slightly crouched and trying crazy moves. And Big George? Well, apparently, he still hasn't climbed 'Too hard for George Smith.' So I guess some individual constraints just can't be overcome...

#### Opportunities for exploring solutions

What does this mean to us as instructors and coaches? Adventure sports are outcome orientated (you try to ski, bike, paddle or climb your line successfully), rather than form, like gymnastics or figure skating (although the outcome is still very important).

Adventure sports require a mixture of balance and coordination, with an ability to 'read' the environment. This resonates with the way that Sam practised his climbing in part 2, Adam Ondra's training descriptions, and the experiences of the elite performers in part 1. Both Aled and JD described the opportunities for movement (or affordances) that their respective environments were offering them. Affordances that, to me, were totally alien and did not exist!

Using Newell's (1986) model, we can describe learning as developing the ability to organise various body parts (i.e. neurons, muscles and joints), in coordination with each other (known as co-coordinative structures, or coordination patterns), and in response to opportunities for movement (affordances), that seem possible from perceptual information picked up from the environment. In other words, this describes the development of perceptionaction coupling. That elusive 'feel!' Instead of assuming an internal focus of attention, we focus on the person-task-environment interaction and allow our movement system



Marianne and Sam Davies [mother & son] regularly work together coaching, developing coaching programmes, researching, and writing both academic and applied articles. As well as extensive personal climbing experience, both Marianne and Sam have been involved in coaching climbing and spent many years in the Mountain Rescue Team whilst living in North Wales.

Marianne has over 20 years of coaching experience and a Masters by Research [MRes] exploring the influence of motivation and practice structure on skill acquisition. She is currently doing a PhD in skill development, under the supervision of Professor Keith Davids.

After Sam completed an undergraduate degree in geology and geophysics, he studied a Masters' degree [MSc] in applied sports psychology, under the supervision of Professor Lew Hardy. He is now completing a PhD on human behaviour, creativity and the development of expertise in mineral exploration decision-making.

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to *self-organise*. Improving this interaction requires developing a keen attunement to affordances, through lots of exploration. There is no single 'correct' way to solve perception-action problems. We bring our own set of individual opportunities and constraints to each situation, and these continue to evolve through time (e.g. as new information becomes available, as we move, become increasingly tired, or nervous).

In dynamic environments, no two performance movements or decisions are likely to be identical. This repetition (of outcome) without repetition (of movements), is achieved by practising in a way that encourages problem solving and movement variability. Extensive practice, by experimenting with lots of movement solutions in realistic environments, increases the development of perception-action coupling. Some of which may be completely implicit and sub-conscious. This is the ability to 'read' the environment and respond appropriately. As a result, practising 'trying to repeat perfect technique' will not develop perception-action coupling!

For improving perception-action coupling, we need to focus on two key aspects:

- **1** Developing the self-organising adaptive coordination patterns needed for our particular sport;
- **2** Developing an ability to identify and use relevant perceptual information in the performance environment.

#### Representative Learning Design

So, this is the important bit. The two parts of skilled performance need to be learnt together – perception and action! As humans, we have evolved to learn (and adapt) movement patterns within an environment; not to learn a movement pattern first, then try to impose it onto the environment after.

In summary, we learn to move skilfully by developing coordination patterns that are linked to perceptual information in the environment. This perception-action coupling requires a focus on all relevant information (e.g. visual, auditory, haptic [touch and pressure], kinaesthetic) that can inform movement options. Each person has, and develops, their own unique movement options. These are constrained by a mixture of their physical attributes, what they perceive, what they think they can do, and what they want to achieve. When we focus on achieving a goal, and the relevant perceptual information, our movement patterns 'self-organise' within the real-time constraints presented at that moment.

To learn adaptive skills, like those required in adventure sports, we need to explore lots of movement solutions, in an environment that is real (i.e. authentic with regards to the perceptual information available). This includes affective or emotional states and stresses that are likely to be experienced during performance. To develop full-body coordination, we need to practice in a way that preserves full-body movement. This is referred to as a 'Representative Learning Design' or RLD. In part 4, we're going to pull the first 3 parts of this series together, exploring how we become attuned to information that is relevant to us, and how to structure practice in a way that defines appropriately sized (and representative) 'search spaces' for exploring movement solutions and decision making.

#### Acknowledgements

There are so many people we spend time talking to and discussing ideas, both within academia and practitioners in the field. The conversations, the research, edits, re-edits and proofreads are all such an important part of the process. We would especially like to say thank you to Martin Crook for taking the time to talk through and corroborate my friend's story, and to Greg Spencer and Eric Brymer for their proofreading and suggestions.



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## LEADERSHIP CLINIC

WORDS BY DR SAMANTHA McELLIGOTT

## Fourth in this series of responding to readers' leadership questions, we will be examining the role of transformational leadership, the INSPIRE model, in our everyday outdoor practice.

I am often asked how the INSPIRE model fits, or indeed conflicts with, the primary concern of safety in our practice. As we have examined previously, the model does not replace the need for keeping our sights fixed on safety. Instead, the INSPIRE model focuses on the extra value we can bring our clients: It is the 'X' Factor in demonstrating leadership effectiveness. In short, it is the thing we do once all of our metaphorical safety ducks are all neatly lined up.

To simplify this idea, have a look at the flow diagram below. It may seem obvious, but I find that this is a really good way to remind myself of all the opportunities I have during an activity to bring extra value to clients. If safety is a concern, or may become so should we not intervene or make changes to our plan, then that is the only thing we should concentrate on *until* the situation has been addressed. Once we have a stable situation, or indeed for all the times that safety is *not* a concern, we have ample opportunity to demonstrate the behaviours that will get the best from our followers.

The safety/development question prompted me to think about how our style of leadership may change depending on the situation. If we look at potential influencing factors on how we lead, these can be divided into (roughly) the three following areas:

- You, the leader.
- The situation/environment.
- The group/group members.

As leaders, we keep a constant awareness of these three things at all times, even subconsciously. We check how we are feeling, how much knowledge we have of the activity/kit/venue, how each of the group members behaves, and what their individual needs and strengths are. While we juggle these thoughts, our leadership tends to reflect what is most pressing.

For example, when we are unfamiliar with the group, or the activity/venue, we are more likely to be more controlling of the situation, until we feel comfortable with it. Similarly, we would adopt a similar style of leadership should the environment or factors within it threaten to become unsafe. At the other end of the scale, if we are in a good place as the leader (comfortable, confident, prepared, open-minded, aware), and the environment and group are non-threatening, then we can afford to allow our followers a bit more room for experimenting, or experiencing things themselves, rather than simply being directed.

The following diagram demonstrates the continuum of leadership styles:

DIRECTIVE	COACHING	SUPPORTIVE	DELEGATING

At the 'Controlling' end, the style is 'Directive,' i.e., telling people what to do. This is appropriate when giving instructions, or introducing a new technique or skill. It is also most relevant in situations where safety has become a concern. As we start to move away from controlling leadership styles, the style is more about 'Coaching'. This is where you have given some ownership to the followers (i.e. they have been taught how to execute a new skill, and now are going away to practice it), but you are still there to keep them focused, to correct their mistakes and give direction as required. Next, there is 'Supportive' leadership, this is where the followers have more experience and/or competence, so can be trusted to complete the task/skill, but with you in the background to guide when necessary. This is a lighter touch style than Coaching, it requires you to move away from telling or advising the group and may often result in the group taking ownership of decisions, such as route planning or activity choice. Lastly, as we move fully into the 'Non-Controlling' end of the scale, this is where we hand over nearly all responsibility to the followers, such as when the followers are very competent. We never fully hand over our role of leadership, however. It is vital that we remember our primary role of safety and our Higher Duty of Care to maintain safe practice for our followers. The INSPIRE behaviours sit at this end of the scale. They are all about supporting the followers to become empowered and have ownership over their decisions and approaches to a task.

There are two key elements to this scale:

- 1 Recognising that our style needs to change depending on the influences in a given situation. This may mean that we move up and down the scale many times even during one activity; and
- 2 That we each have a preferred style of leadership, which may bias us to demonstrate that style even at times when it may not be the most appropriate (e.g. being too directive even when the followers have increased competence and skill).

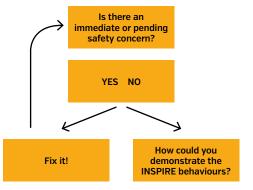
Between the flow chart and the scale, hopefully we can become more aware of when it is appropriate to adopt a certain style, and how we can always keep safety as our primary focus.

By reflecting on our current practice, we should be able to work out our preferred style of leadership. Once we know this, we can then ask ourselves if it is indeed the most appropriate style for a given situation. If not, then go back to the flow chart and decide whether the situation is (or may soon become) unsafe, in which case, a more controlling style of leadership is better. Or, if the situation is calm and there is opportunity for developing your followers, then think about how you may coach, support and then delegate to your followers. These opportunities for development are an ideal time to practice the INSPIRE behaviours.

Once we keep the flow chart as our key focus, we can then decide how much and which parts of the transformational leadership elements are appropriate to demonstrate.

Think about the INSPIRE behaviours and reflect on how your preferred leadership style, and potential influences on your style may be limiting development opportunities for your followers.

Are there any behaviours that may fit with some of the other leadership styles? Does your preferred leadership style support the model, or conflict with it? How might you become more adaptable in your approach to changing leadership styles? How can you raise your awareness of which style is most appropriate for the situation? How could you influence your preferences about leadership style?



VISION	SUPPORT	CHALLENGE
Inspire and motivate your followers with a unified vision	<b>P</b> raise, and give constructive feedback to help your followers develop	Insist on setting high standards, relative to each individual
<b>N</b> urture an environment of team-focused goals	<b>R</b> ecognise and respond to each individual's needs	Encourage followers to create and implement their own solutions
<b>S</b> et the example you want to see in your followers		



**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.



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#### Mountain Training's newest qualification, Rock Climbing Development Instructor, was launched in April 2019 and a wide variety of candidates have joined the scheme so far.

The qualification is all about developing climbers on single pitch crags, including teaching them to lead climb. As we hoped, it's providing people with improved pathways and opportunities for progression, either as it allows them to continue developing beyond Rock Climbing Instructor or because it provides a stepping stone to Mountaineering and Climbing Instructor which can otherwise feel like a big jump. It has been great to see some really experienced instructors who have been teaching climbing for many years and some very strong sport and trad climbers engaging with the scheme.

After reviewing the registration applications we've had so far we've come up with some helpful hints for those of you thinking about applying in the future.

#### **Read the prerequisites**

It's really important that you understand the minimum level of experience required of a Rock Climbing Development Instructor candidate at registration. Training course content is pitched at a level which requires a certain level of experience and the prerequisites have been agreed across the UK and Ireland so that candidates are able to take an active part in the course and understand the context behind the various techniques being taught and discussed.

#### Show clear evidence of your experience

Your DLOG should make it really clear to a Mountain Training technical officer that you have sufficient experience to meet the prerequisites. The recently added 'flag entry' feature in DLOG can be used to highlight your most relevant entries rather than hoping that they'll be found in amongst all the Severes you climbed en route to Rock Climbing Instructor assessment. In particular, evidence of at least 20 days operating as a Rock Climbing Instructor (since qualifying) at a variety of venues should indicate your preparedness for this scheme; if the bulk of those sessions have taken place indoors your application will likely be rejected.

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#### **Recent experience is important**

Our technical officers have observed a number of the early training courses and noted that candidates with **recent** trad and sport climbing experience were well-placed to absorb the information being covered. As is the case with Mountaineering and Climbing Instructor training, the more climbing and instructing you have done in the months and years leading up to your training course, the more you will be able to focus on the syllabus areas that are new to you, such as how to structure teaching progressions.

#### **Present your best self**

We find it really inspiring to review logbooks from candidates when they've made an effort to ensure we're seeing the best of their experience, not the sum total of it. Reading about the adventures you've had and the instructional days you've lead and learned from reassures us that you're motivated and committed to the scheme.

If you think you'd like to become a Rock Climbing Development Instructor, remember that you've already been through the training and assessment process of one of our qualifications. You know what it's like. To succeed again, you need to focus and fully commit to the next level of your own development.

Registration for the Rock Climbing Development Instructor scheme is an application process and you need to meet the following prerequisites:

- You must be a qualified Rock Climbing Instructor.
- You must have delivered a minimum of 20 days as a Rock Climbing Instructor, since qualifying, at a variety of venues and with a variety of groups, recorded in DLOG.
- You must have led a minimum of 60 named single pitch routes using leader placed protection in three different climbing areas at VS 4c or above and logged them in DLOG. You may include full multi-pitch routes using leader placed protection (up to 50% of the requirement).
- You must have led a minimum of 60 sport climbs in three different climbing areas at 6a or above and logged them in DLOG. Up to 50% of this experience can be outside the UK and Ireland.

# Key stages in teaching compass skills

The table below broadly illustrates three distinct stages of navigation progressions linked to terrain. They tend to match many outdoor qualification progressions as well which begs the question as to why we don't have a universal and trainable approach to teaching the subject within the sector.

It is often a challenge for trainers to either limit how much they teach on various courses or to quickly ascertain a candidates' understanding of a skill and then fill in the gaps of underpinning knowledge. Ask Mountain Leader trainees to set a map with their compass and watch how many will line up different parts of the compass with the needle and grid lines, even turning the dial sometimes. Why? After commenting on the variety of actions observed, I have a lucky-dip bag containing the first two compasses in the image for them to repeat the task. It's entertaining but makes the point; setting a map is a two second job requiring just a needle.

So much of navigation is confidence and we can develop that through progressions with map scales, use of appropriate terrain and features, skills and strategies including compass type and use.

Relatively novice walkers are sometimes taught compass skills to go cross-country when in reality they intend to follow easy paths through the forest or valleys. A quick look at the Beginners guide to using a compass on the Ordnance Survey website provides a classic example of a mismatch between

context and skill likely to defeat a beginner; teaching a technical cross-country skill to make a static mapsetting decision at a track cross roads in a forest.

Is this one of the reasons why some people find navigation difficult and misguidedly resort to the phone GPS as their sole navigation aid? Perhaps if we adapt the way we teach, we might give folk the confidence to combine modern technology with the traditional tools.

#### **Compass progression**

Using a progression of compasses can help with small confidence-building steps in learning to understand and use a compass.

The more complex the compass, the more confusion for the novice and the more the tutor is tempted to teach. As a general principle, numbers are only required for sharing information or to manage magnetic variation. (Remember that walking compasses are generally inaccurate up to 2.5 degrees according to the manufacturer). It is possible to match the compass to the progressions in terrain and experience.

Column 1 in the table is the limit of compass work many awards require, from the Lowland Leader qualification, Level 2 Mountain bike leader and the first level of paddling leadership awards to Bronze NNAS and DofE. It is for static decision-making, a confirmatory bearing rather than on the move following a bearing.

 $\mathbf{WORDS} \ \mathbf{AND} \ \mathbf{PHOTO} \ \mathbf{BY} \ \mathsf{NIGEL} \ \mathsf{WILLIAMS}$ 



PHOTO Compass progressions to match the learning stages. Simple compasses available from

www.compasspoint-online.co.uk

1. Following line features e.g. paths in lowland terrain	Line feature to line feature or obvious point features with short X-country legs	3. Line or point feature to point feature in featureless terrain or poor visibility
Building confidence  Maps and symbols  Map scales  Map setting with and without compass needle  Pacing/timing  Introduction to contours – simple up and down recognition  Simple map setting decision making – which path to take?	Confidence off line features  More contour interpretation & recognition of linear contour features, feeling the third dimension  Route planning thinking about strategies  Moving with or following a simple compass bearing	Confidence with contours and compass in poor visibility  Use of contours as a primary navigation feature including slope aspect  Relocation skills sequence from slope aspect to linear feature to point feature
Compass Static – Confirmatory compass bearing to determine which path. Map to ground (you know where you are and which path you want on the map). Compass base plate on map along path then orientate together with needle.	Compass  Moving with or following a simple compass bearing.	Compass Following a full bearing accurately across country.
Strategy Tick off features, catching features, simple route decisions.	Strategy Aiming off, relocation along line features, ground to map (you don't know exactly where you are along a line feature or possibly which of several similar line features you are on). Involves sliding map (orientated) under compass.	Strategy Complex route decisions, attack points, boxing, dog legs, combinations of strategies. All map to ground and ground to map relocation skills to operate in poor visibility.

#### **Compass teaching progressions**

This might differ from what you have been taught, or indeed teach - so be prepared for some paradigm challenges!

- Map setting with *needle only*.
- **2** Use of *needle and base plate* only for static confirmation of the path you want to take at a junction.
- 3 Use of needle and base plate, aiming with compass accurately placed and held on the map for short cross-country legs, linking linear features. Example - going from a path to a
- 4 Needle, base plate and dial for recording or communicating a bearing with others, or for long-distance cross-country legs where it may be easier to operate the compass off the map\* or adding magnetic variation if it is relevant.

For a tutor, explaining the base plate, map and body alignment can be challenging - and not just with beginners. The easiest way to describe the process seems to be:

- Hold the map naturally in front with the intended path pointing directly away from the body. (The path on the map is at right angles from the tummy which is where the navigator will naturally hold the map), the map doesn't need to be orientated to north at this stage.
- Maintaining that alignment, place the edge of the base plate along the path (with the direction of travel arrow pointing away).
- Keep the map and compass locked together and aligned. Moving only one's feet, waddle around like a penguin until the red end of the needle points to the top of the map and is accurately aligned with the northing grid lines.
- Look up to see straight down the path required.

The same process works for going cross country aiming as one would normally do on objects ahead.

If a bearing needs to be communicated or magnetic variation required then keeping everything aligned as described above, turn the dial to align the N to the red end of the needle (which should be pointing to the top of the map) and make any final detailed adjustments. This system provides useful teaching progressions but also reduces the chance of making dial turning errors.

#### **Checking linear features**

One can check the alignment of passing linear features by pointing the compass accurately along the feature, then setting the map by observing the needle and north/south gridlines. Keeping everything steady and accurate, slide the map in under the compass and observe if the compass edge matches the expected feature.

This is really useful even if you have set and are in the process of following a traditional bearing on the compass. A quick bearing check on any linear feature can be done without having to move the dial – in effect you can operate two bearings at once. This is useful for candidates and assessors following a candidate to quickly check the alignment of tick off features, and it can be virtually done on the move.

It should be pointed out that in a few decades time if magnetic variation gets well beyond the tolerance of the compass then this process may lose its accuracy for use across country, but it will still provide a valuable teaching progression for beginners looking for quick static decision confirmation at easy junctions. However, by then we will probably have a navigation gizmo that does it all for us and never runs out of power!



Nigel Williams is the former Head of Training at Glenmore Lodge. He is a Winter Mountaineering and Climbing Instructor, International Mountain Leader and Level 3 Orienteering Coach. He has been running "Teaching Navigation" workshops for over a decade and is author of the book Teaching Navigation: practical ideas for outdoor tutors. E gn.williams@btinternet.com

> A compass with a dial can be operated off the map without turning the dial by using the simple or quick bearing, needle and base plate only. When the needle is aligned with the northing grid lines and pointing to the top of the map, note the degree number the red end of the needle is pointing at on the dial (a random number which is meaningless to share with anyone else). The compass can then be removed from the map and the needle aligned to that number to recreate the bearing.

> This can be very useful in winter with cold fingers, big mittens or a stiff dial on a sticky Ortlieb map case. It is of course very quick compared to turning the dial yet just as accurate if used well in conjunction with the 3rd dimension - contours, and careful aiming.

Not turning a dial also reduces the likelihood of the novice building in errors such as 180's.



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#### **BOOK REVIEW**

#### PEAKS OF EUROPE: A PHOTOGRAPHER'S JOURNEY

by Johan Lolos

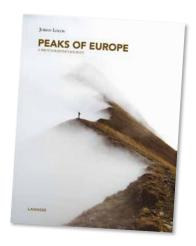
Reviewed by Paul Caddy

In 1895 Norwegian painter Christian Krohg visited the Lofoten Islands, the long and thin Arctic Archipelago that juts out of the spine of northern Norway like an errant tail fin. On seeing the Lofotveggen, the wall of razor-sharp peaks that seem to smash into the sea on its southern flank, he exclaimed, 'difficult – how difficult to paint this! To convey the elevation, the grandeur and nature's inexorable, merciless calm and indifference'.

115 years later, in 2010, social media site Instagram was launched and changed everything. Millions of images are now uploaded every day. Type in the hashtag 'Lofoten' and, at the time of writing, almost one million posts are flagged up. The result? Few users nowadays seem to experience the Scandinavian painter's frustrations in trying to capture the essence of this achingly beautiful place.

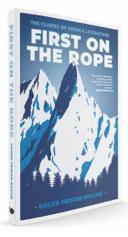
So when, on a recent trip to Chamonix, I happened upon a landscape photography-cum-travel book, *Peaks of Europe*, by Instagram 'influencer' Johan Lolos, I was a tad sceptical. (To be fair, the use of the term 'influencer' didn't really help.) I wondered whether Lolos, a self-taught photographer would make the creative grade.

In essence, the 256-page book documents Lolos' road trip around some of Europe's most notable mountain ranges and is split into three parts: the North (including the Lofoten Islands), the Balkans, and – no surprise here – the Alps. He snapped over 27,000 pictures during his five months on the road and succeeded in whittling them down to his favourite 200 for this project. The resulting work is a mix of images of relatively unknown landscapes, such as the raw, otherworldly summits of Spitsbergen, at 77 degrees north, and better-known views, such as the sun-bleached buildings tottering above the clifftops at Santorini, next to an azure Aegean Sea.



But ultimately mountains are just that: mountains. These lumps of rock, as Krohg suggests, continue not to care about the comings and goings of human societies or, as it happens, landscape photographers. No matter how stunning a series of mountain shots is – and this book has them in spades – it can feel as though something is missing in many books about this environment: a human element or some other factor to anchor these images into the reality of daily life in the hills. The joy of Lolos' book is watching him learn and develop as a photographer as he includes increasing amounts of portraits and other snapshots of mountain life into his work. In his first week, he plucks up the courage to take a portrait of a hostel manager. As the miles rack up, his confidence swells and by the time he reaches Greece, from where his family originates, he's in his stride. It's no surprise, therefore, when he says that the people he met were what he remembered most about his trip.

In the accompanying text Lolos is candid about the ups and downs of the trip and even about his own shortcomings. In the end, the quality, breadth and honesty of his work won me over. As he says, *Peaks of Europe* 'should be considered first and foremost as a travel diary, with photography as the main medium'. Instagram has its place – and I don't think that it will be going anywhere anytime soon – but I'm thankful that photographers like Lolos still see value in the printed book and its ability to allow a more considered study of a subject. I think Krohg would approve.



**FIRST ON THE ROPE by Roger Frison-Roche**Reviewed by Malcolm Creasey

This classic piece of French literature is given a new lease of life, and is the latest offering from Vertebrate. Originally published in 1942, under the title *Premier de cordée* it was translated into English during the post war period. This is a historical fiction based in and around Chamonix, depicting the life of a young man and the hardships he faced as his life unravels in tragic circumstances. Although fictional, this book draws on the personal knowledge of the author and gives a clear insight in to what life must have been like in the high mountain villages during the 1920s.

These were the days when there were few cars around, telephones

were often regarded with suspicion by the older generation and there were no cable cars to whisk you back over from the Italian side of Mont Blanc if your climb finished on the other side of the mountain. Back then it was simply a case of having to walk back from Courmayeur, over the Col du Geant and down the Mer du Glace – a two-day expedition in itself!

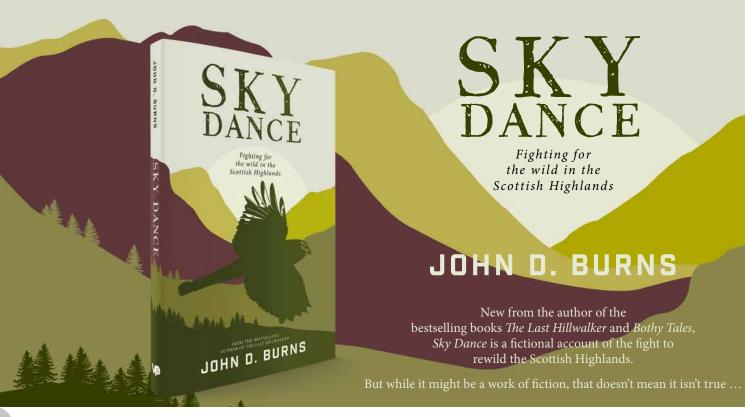
Modern day mountaineers and tourists think nothing of jumping on the first available telepherique to grab a quick day in the high mountains before heading back to the comforts of the valley. Life was so much different then and it is, after all less than a hundred years ago – have we progressed? – in some ways yes undoubtedly – but in other ways I'm not so sure.

The book epitomises the language and the writing style of days gone by, but it has stood the test of time. It is an excellent tale neatly packaged as a paperback with 256 pages using paper from sustainable sources, and for those of a certain age – a good clear font.

Without giving too much away there is tragedy, triumph, theatre and all the emotions in between, once embarked on the tale, this book is difficult to put down.

Those of you lucky enough to have climbed around the Mont Blanc region will recognise exactly where the drama takes place, if you haven't then it won't matter as the author describes the scene eloquently. It is an easy read and should be enjoyed by mountaineers and non-mountaineers alike.

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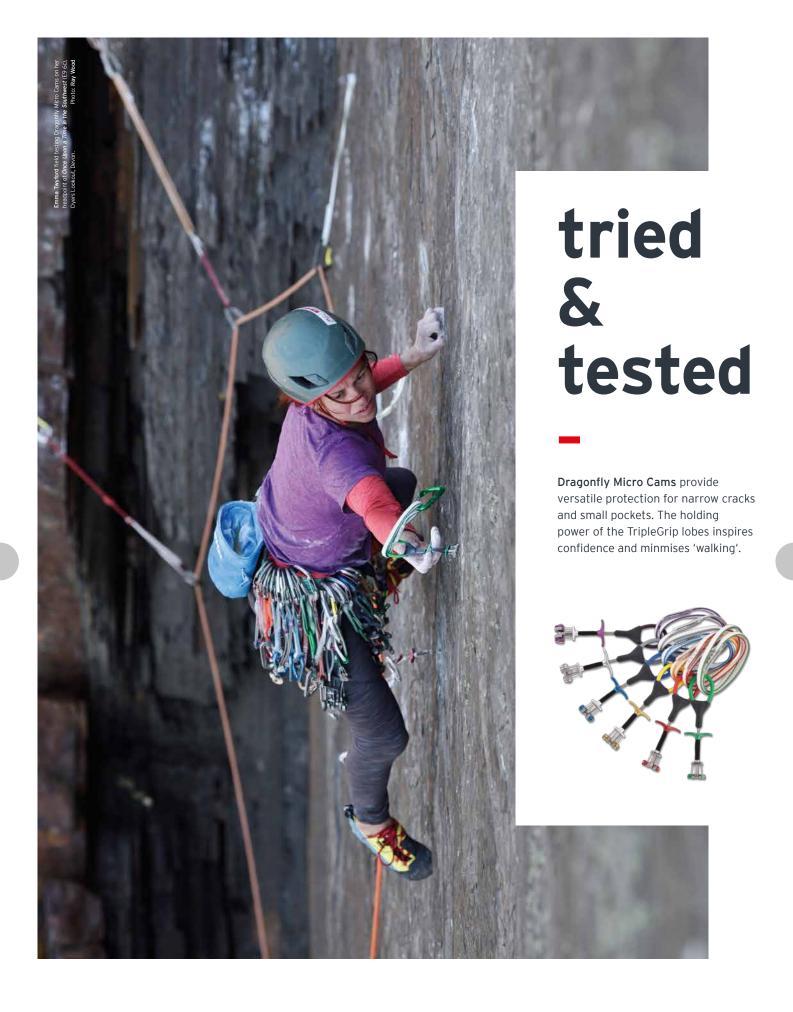
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