

The Professional **Mountaineer**

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The Association
of Mountaineering
Instructors

British Mountain
Guides

British Association
of International
Mountain Leaders

Mountain Training
Association



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HAUTE ROUTE**

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The Professional Mountaineer

ASSOCIATION CONTACTS

AMI Sandy Paterson
development@ami.org.uk

BAIML Ian Spare
communications@baiml.org

MTA Belinda Buckingham
belinda@mountain-training.org

BMG Dave Searle
davesearleguiding@gmail.com

EDITORIAL

Technical editor Steve Long
steve@mountain-training.org

Sub editor Jo Peters
jo@mountain-training.org

Production co-ordinator Belinda Buckingham
belinda@mountain-training.org

Design Jane Beagley, Vertebrate Publishing
www.v-publishing.co.uk

ADVERTISING

Advertising sales Caroline Davenport
T 01829 781 327
E caroline@media-solution.co.uk

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NEXT ISSUE

Summer 2021 Reading the landscape, Cape Wrath trail, stress management in the outdoors. Copy deadline: Friday 16 April 2021.

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Our front cover

Lou Tully enjoying some winter scenes from her doorstep – Moel Eilio, North Wales. ©Helena Robinson

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EDITORIAL



ABOVE The editor acquiring new skills during lockdown. © Anita Long.

Writing this editorial in the depths of a February freeze, already the first signs of spring are appearing on a sunny morning. Robins are facing-off in fairly listless disputes that will hot up as the soil warms. Blackbirds are chasing off potential competition and starting to show unreciprocated interest in the females. Such are the interludes that liven up the groundhog days of a lockdown, already stretching for months rather than weeks.

Free access to the hills is starting to feel like a distant memory. Most association members working their way through a qualification process are finding a cul-de-sac that has lasted far longer than they initially anticipated, and whose future existence was indiscernible when they first committed to the process. A new “postcode lottery” has evolved for us, depending on our home location in relation to wild places. Contrasting dramatically with virtual house arrest for many of us is the impressive but incongruous winter ascent of K2 by a Nepalese team, followed by a tragic chain of events for other participants in this great adventure.

We have already identified the lights

at the elusive exit of this tunnel, as the world adapts to a post-pandemic world, where access to outdoor space and walking activities is acknowledged to have been one of the most important safeguards to mental and physical health. Our expertise will be in great demand in this brave new world. The associations have been working even more closely together than ever before and I am confident that our logos and “brands” will continue to gain traction. Internationally, the UIAA is working on similar goals for trained leaders and instructors. Our long-awaited database is now ready for public viewing and we can now allow accredited associations to use the famous safety logo for qualifications holding our logo. Skills certifications will be the next stage...

In the meantime, resilience favours diversification and skills acquisition. Many of our members are currently working as labourers or in other short-term manual or administrative posts. A day will come when this investment will stand us in good stead, starting with the content in this issue of *The Professional Mountaineer*.

Steve Long
Technical editor

OUR COVER



Helena Robinson

Helena Robinson is a trainee clinical scientist living in North Wales. She enjoys being out in the mountains and drinking tea.

OUR SPRING ISSUE CONTRIBUTORS INCLUDE



Nathan Christmas

Nathan is an MTA member, lichenologist, and research associate at the Marine Biological Association of the UK.



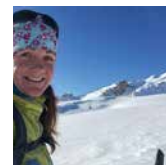
Stuart Halford

Stuart is a Winter Mountaineering and Climbing Instructor based in Cumbria. He works on an associate basis as an instructor in the mountains and on corporate personal development programmes.



Tom Horrocks

Tom is a Mountain Athlete Coach and founder of Adventure Fitness Consultants. He holds the Mountaineering and Climbing Instructor qualification and is a Winter Mountain Leader



Tania Noakes

Tania is an IFMGA Mountain Guide and BASI Nordic Ski Teacher. She has been leading ski-tours in the European Alps and overseas for over fifteen years.

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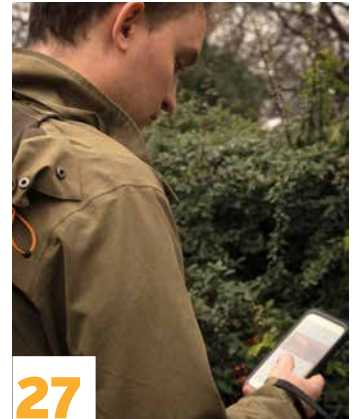
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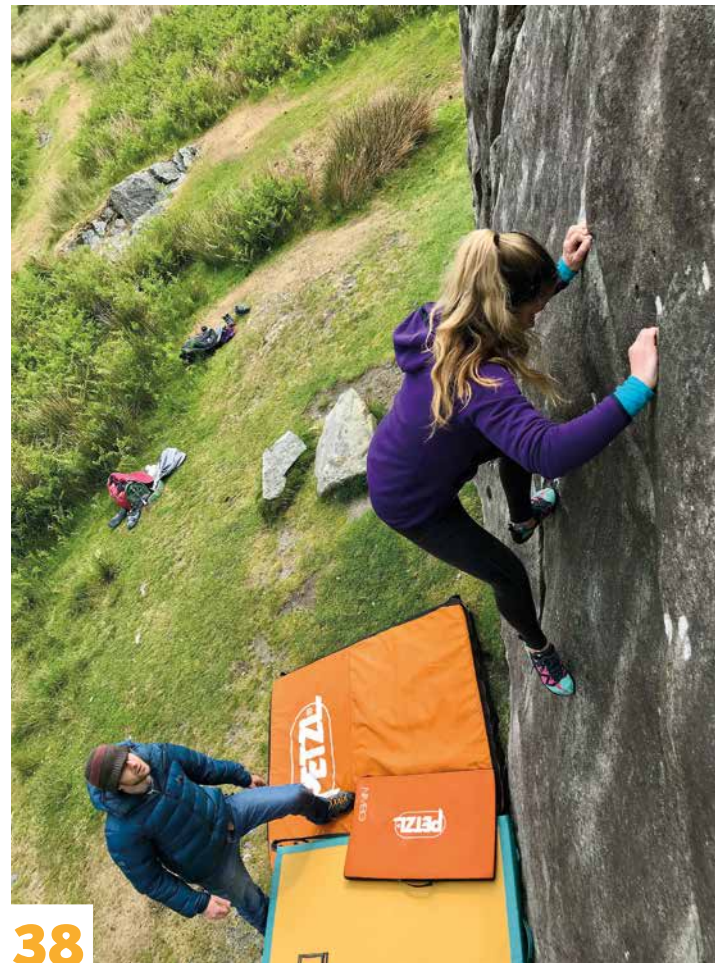
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Feeling inspired?

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

Fancy advertising?

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

NEWS



THE ASSOCIATION OF MOUNTAINEERING INSTRUCTORS (AMI)

By the time this goes to print we hope that work has started to resume at some level. AMI has continued to work with relevant organisations to clarify regulations and make representations. AMI guidance has continued to be updated. In addition, the committee have extended the current membership year so renewal fees will coincide with hopefully a better financial period for members.

The Equity and Diversity working group continues to make progress and has developed CPD looking at diversity and how Mountaineering Instructors can influence change. In addition, the AMI charity tender process for members sponsored by Alpkit Foundation has been successful for a second year and a range of projects are being funded.

The founding member of AMI, Simon Powell, has funded a bursary to support one MCI per year to undertake their Winter Mountaineering and Climbing Instructor training. This is an incredibly generous offer and will run for the next ten years. We all owe Simon a huge debt of thanks for this, and also for his vision in setting up AMI originally. He has created a digital archive of historical AMI records which will be hosted on the website soon.

The revised AMI Guidance for Technical Advisors and Delivery Plan 2021/22 should be finalised ready for the AGM which will be held virtually on 21st March 2021. I hope to 'see' you there and here's to a successful spring and summer!

Phil Baker (Chairman)



© Sandy Paterson

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.

T 01690 720123
www.ami.org.uk



BRITISH MOUNTAIN GUIDES (BMG)

2020 ended with our first virtual AGM, Open Forum and Risk Management Seminar. With much trepidation beforehand this was the largest ever attendance at a BMG AGM. I thank everyone for participating enthusiastically over a weekend of meetings and presentations. After spending most of the year under various levels of restriction and lockdown it was an uplifting experience to see and converse with so many familiar colleagues. The skills developed holding virtual meetings point to the future, but it will be so welcome to enjoy an actual conversation and a real drink next time around.

In 2021 the immediate challenge is discovering and navigating the various work-permit and equivalence procedures needed for individual countries in Europe where we wish to continue to practise our profession. Considerable membership involvement and communication with authorities and other associations is bringing some clarity but uncertainty remains.

We have been fortunate to operate some training courses in the Alps for aspirants and trainees this winter. However, with a comprehensive lockdown in the UK and with severe restrictions elsewhere there is little guiding work taking place. For members fortunate to live close to the mountains rare ski conditions have been enjoyed in Snowdonia as well as good ski and climbing conditions in Scotland.

Martin Doyle (President)



© Martin Chester

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

T 01690 720386
www.bmg.org.uk



THE BRITISH ASSOCIATION OF INTERNATIONAL MOUNTAIN LEADERS (BAIML)

It was great to see nearly half of the membership take part in our first ever online AGM – a pattern that has continued with some fantastically well attended CPD webinars delivered by BAIML and UIMLA. We've been amazed at the interest and have more sessions planned; they'll be advertised on CMS and our Facebook group. The Regional Reps have also been looking at lots of creative solutions for regional CPD so watch out for those as they are announced. If you're reading this and not getting our emails please check your email settings in the CMS system.

As I write this, nearly all of the UK is in some form of lockdown – for people who love being outdoors doing fun things it can be especially tough. If you're struggling then please don't do so alone, get in touch. We might not have the answers, but we can let you know you're not on your own.

The Covid-19 and Brexit situations continue to evolve and throw us all challenges. It's likely that 2021 will be another very difficult year for many members, but hopefully we'll start to understand how to move forward as International Mountain Leaders soon. If there is one thing I know about BAIML members it's that we're adaptable and good at finding solutions.

Kelvyn James [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.

T 01690 720272
www.baiml.org



THE MOUNTAIN TRAINING ASSOCIATION (MTA)

We've kick started 2020 with another series of online webinars to help support members during these difficult times. All our webinars have been provided by experts in their fields and include a whole range of topics relevant to you, covering topics based around the qualifications and assessments, the environment, coaching, leadership and much more. These webinars provide a great learning opportunity and many count as CPD. You can find the recordings and presentations in the resource library in the members' area of the website.

Our collaboration work with Plantlife is getting underway this spring as members start monitoring upland vegetation as part of the National Plant Monitoring Scheme, supporting a project investigating the impact of climate change and environmental and management factors on UK semi-natural habitats. We have entered our fourth year of collaboration with the Met Office who are providing another series of specialist mountain weather workshop online and around the UK later in the year.

This year we will be publishing an updated CPD Policy, carrying out a membership survey and creating further opportunities to become a mentor and to receive mentoring support. We will also be working on some joint association projects with AMI, BAIML and BMG.

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

THE AUSTRIAN HAUTE ROUTE

WORDS AND PHOTOS BY TANIA NOAKES



The “Hoch Tirol” or “Austrian Haute Route” is a magnificent journey through the Eastern Alps. It follows a logical route through some very beautiful mountain terrain and includes several unforgettable ski descents.

It's a glacial tour traversing some of the highest peaks in Austria, including the Gross Geiger (3360m), Granatspitze (3086m) and the Gross Venediger (3674m). The area is quieter than the western Alps and as you wind your way through the valleys of the South Tirol, Salzburger and Carinzia provinces you get a real sense of being in a mountain wilderness on your own terms. Midway, the Innerschloß valley is considered by many to be one of the most beautiful valleys of the Eastern Alps.

This isn't a ski tour for complete novices. The journey is both long and demanding and many of the days require altitude gains of 1000–2000m. Don't be intimidated though because this also means a great deal of quality skiing and the opportunity to summit a 3000m peak every day. These days are eased by staying at very welcoming huts, which offer great local food and wine. Quite a few of them even have hot showers or saunas to reinvigorate tired legs in time for the next day.

After 140km the traverse brings you to the slopes of the Grossglockner, Austria's

highest summit at 3798m. This is not only a very beautiful mountain but one which, for a suitably experienced team makes a fitting finale to the best ski tour the Eastern Alps has to offer.

Best time of year?

Beginning March to the end of May.

How good a skier should I be?

Intermediate to advanced off-piste skiers. The ascents are relatively long, a rucksack must be carried, and some descents may have to be skied on tired legs. There are moderate sections of steeper skiing including short sections of 30 or more which must be negotiated in control. You should be able to do a reasonably competent 'uphill' kick turn on moderately steep slopes.

How physically fit do I need to be?

This is a physically demanding tour both in terms of daily ascent and the accumulated mileage over the six days. Most days involve altitude gains of 1000–1500m with one day requiring 2000m of ascent. You should be

able to ski uphill at a steady pace of 400m per hour. You should be reasonably organised with your personal ski-touring equipment.

How technically demanding is it?

In terms of mountaineering skills it is not a technically demanding tour. It traverses large glaciers, including areas which are notoriously crevassed. Because of this it is essential you have the necessary skills for safe glacier travel or go with a Mountain Guide. Most of the peaks can be ascended on ski or relatively easily on foot. The Granatspitze and Grossglockner require mountaineering skills, judgement and appropriate technical equipment. Some basic climbing experience would be beneficial if planning on climbing these excellent summits even in a guided group.

Recommended maps

AV Map number 35/3 Zillertal Alp 1:25,000, AV Map number 36 Venedigergruppe 1: 25,000, AV Map number 39 Granatspitzgruppe 1: 25,000, AV Map number 40 Grossglocknergruppe



OPPOSITE Day 0: Searching for good snow on the descent. 1. Day 1: The group about to ascend to the Umbalkees glacier to the Reggentorl. 2. Day 2: Klaus and Sam ascent the last few meters to the Gross Geiger. 3. Day 3: Johannishütte in the early dawn. 4. Day 3: Ascending to the Gross Venediger. 5. Day 3: Sam refueling in Austrian style Matrier Tauernhaus. 6. Day 4: Ascending to the Amataler Hohe. 7. Day 6: Chris and Klaus downclimb into the Glocknerscharte between the Klein and Gross Glockner summits.



1:25,000. The Maps are also available in electronic format for compatible GPS devices.

General area

The nearest airport is Innsbruck where car hire is easily available. Alternatively with more time you can use bus and train connections to get you to and from the tour.

It is advisable to have a 'warm-up' day piste skiing including a short tour before you set off. From Innsbruck you have lots of options for piste skiing not far from the city itself. We chose to do our warm up days at Hochzillertal/Hochfugen but many Austrian resorts are just as good.

The tour itself can be started from north or south of the E-W mountain chain. We started ours from Val Aurina (Arhntal) in South Tirol. This is considered the classic start but you could start from the Zell-am-Ziller valley in the north, or for simpler logistics, from Präggraten in the Virgental to the south. The Val Aurina is now part

of Italy but before WW2 it was Austrian and even today it retains much of its Austrian feel. In winter the road ends at the small village of Kasern where there are some guest houses and a car park where you can leave your vehicle. If you do decide to leave a vehicle in Kasern count on half a day public transport to get you back to it after the tour. (Taxi Lucknerhaus-Kals, Bus Kals-Lienz, Train Lienz-Brunico/Bruneck, Bus Brunico-Kasern). Enjoyable and also part of the adventure!

Recommended equipment

50 litre rucksack with side straps for carrying skis. mountaineering axe, 12-point crampons, ski touring skis, bindings, skins and ski crampons. Windproof/waterproof jacket, fleece trousers and waterproof over trousers. Warm base layers, light T-shirt for mountain huts, toiletries, pack-towel, warm gloves and contact gloves, sun hat, warm hat, sunglasses, ski goggles, small first aid kit for personal use. Water bottle or thermos bottle. ■



Tania Noakes is an IFMGA Mountain Guide and BASI Nordic Ski Teacher. She has been leading ski-tours in the European Alps and overseas for over fifteen years. Based in Chamonix but often in the Dolomites or Sardinia, she remains passionate about exploring the less well-known corner of the Alps. In 2015 she crossed the Alps on skis from Vienna [Austria] to Menton [France], a journey of 82 days and over 1100km. She can be contacted through www.classicclimbs.com or her adventures followed on instagram.



Squall Hooded Jacket

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WORDS AND PHOTOS BY ANDY HODGES

THE GIANT'S TRAIL

ABOVE Mont Bechit ridge, Day 2.

Take two weeks, add a physical challenge, stir in some world-famous mountain sights, sprinkle some beautiful mountain huts and garnish with Italian cuisine: I give you a perfectly baked two-week expedition finishing at the foot of the highest mountain in the Alps. The Alta Via 1. Not the Dolomites, the other one.

Alta Via means simply, “High Route”, and this trek certainly lives up to that billing. It climbs from the valley floor to repeatedly cross cols over 2,800 metres in height topping out above the vegetation line with a stunner of a final col. Col Malatra at 2,928 metres, is barely three metres wide as it squeezes through the cliffs to reveal Mont Blanc.

The handy half way point of Valtournenche allows the route to be taken in two one-week escapes and the second half serves as a perfect ‘Haute Route’ if you prefer French (which is widely spoken in this old Savoyard stronghold). The king of the Valtournenche valley is the Matterhorn (Cervin to be correct, we are in Italy after all) and this second week finishes at Courmayeur and in the shadow of Mont Blanc.

To dismiss the first week would be terrible mistake. This half of the trek benefits from quiet paths, views over a sea of clouds as the Alps relax onto the Piedmont plains far below. Some of the most luxurious mountain huts with restaurant standard meals are a treat and the giant of Monte Rosa acts as a perfect backdrop.

The true AV1 begins in Donnas in the main valley and is a fairly stiff first day, climbing over

1,500 metres to reach the mountains, many will choose to reduce this day by using a local bus or the excellent TrekBus. The final ascent to the wonderful Etoile du Berger is through mixed woodland where, late in the season, the trees will be shedding nuts for the avid forager whilst the undergrowth will provide the fruits of the forest. Deer and lizards may well be spotted in the dappled shade and sun-warmed stone walls. A beer on the terrace high above the Lys valley watching the sun set over the Gran Paradiso range ends a perfect first day.

Options allow trekkers to traverse the Mont Mars nature reserve in either one or two days, eventually reaching the newly built Rifugio Barma in its mountain cirque above the little lake. To miss the simple traverse of Mont Bechit would be a shame, it gives a feeling of real mountain adventure whilst the mountain goats perched on the crags keep an eye on your progress. Should this option be taken then a night at the family-run Rifugio Coda will be required, named after a local partisan fighter, Delfo Coda, executed in 1944. A more direct route will cross col Portola, passing a witches’ coven site with engraved ancient stones.

From the Barma hut the route crosses a couple



Andy Hodges completed the International Mountain Leader qualification in 2018 and now mixes first aid, safeguarding and navigation training with IML leading work (although he is currently working as a Lateral Flow Tester through the current situation). *Mountain Adventures in the Maurienne* was Andy's first guidebook and the Aosta Valley has become his second backyard with *The Giants' Trail* due out in February and a day walks and via ferrata book due out in 2022.

DESTINATIONS



1



2



3



4



5

1. The majesty of the Mont Blanc range is the highlight at the end of the trek.
2. Leaving the Mont Mars nature reserve.
3. The old streets of Cretaz, Valtournenche the half way point.
4. Coombe Dean Students descending to Courmayeur and the end of the trek.
5. Mont Rosa looms out of the mist, Mont Bechit, Day 2.

of cols to a high mountain plateau sprinkled with small mountain tarns and wetlands home to many familiar plants. The route offers options to drop over the main ridgeline to remote mountain huts shrouded in the perpetual afternoon mists. The clouds usually settle and a stunning panorama emerges above them. Crystal clear skies each morning begins the cycle again as the hot plains draw moisture laden air from the Mediterranean and clouds begin to grow in the early afternoon. A day or two later and the mountain hotel at Niel, La Gruba, offers another fabulous night with top quality food and wines.

Another day, another climb, another col and then a long descent down the beautiful Loos valley to return to the Lys valley and the first of the Walser settlements encountered in the high valley. A wander past the Castel Savoia, the holiday home of Queen Margherita, and a night in the quaint Gressoney St Jean allows packs to be restocked. An aperitif in the square watching the world go by is a delight to savour.

Passing through Alpenzu, a high mountain village built in the Walser style, the Lys valley is left behind, after passing through more high villages including Cuneaz which claims to be one of, if not the highest permanently inhabited village in Europe. There are a number of options towards the end of the day but pushing on and missing the Vieux Crest Rifugio above the Ayas valley would seem to be a sin. This is another 'luxury' refuge and well worth a night. The following morning rewards the early bird with the closest views of the Matterhorn to date, even if they are glimpses between the pine trees; one long day will allow trekkers to arrive at Valtournenche and its collection of hotels, B and Bs and guesthouses. Two days allows for a night in another mountain hut and a possible 'roll through' of Valtournenche.

A short walk to Rifugio Barmasse, perched above the Lago di Barmasse leaves the valley and the following day is a tough affair; a number of high passes, a long route and long-lasting snowfields to cross at the end of the day will draw on all your mountain skills. No wonder there is one of the highest churches in the Alps situated

here, at 2,600 metres. After another col (something of a feature on the AV1!) a long descent down 'Avalanche Alley' to the villages of Oyace and Lexert allows trekkers to marvel at the snapped tree trunks littering the sides of the route, this is certainly no place for a trekker to be in winter time but perfectly safe in the summer.

Options offer themselves over the next few days, but, having crossed the Col Champillon and grown used to the remote double peaks of Gran Combin watching your progress, the mighty valley of St Bernardo is reached. Whether you choose to stay on the official route and cross the valley at St Rhemy or divert along the Via Francigena to the monastery of Grand St Bernard is a choice to be pondered. The kennels and museum offer a cultural diversion and the treasury is a sight to behold! The two route options rejoin near the Rifugio Frassati before climbing above the vegetation line and the land of scarce plantlife, scree and snow. Alpine Toadflax will make an appearance growing close to the path then nothing, just rock and scree. Fixed ropes aid the ascent to the narrow col, so small it is hard to identify from a distance, and then, bang, it's pretty much downhill all the way from here!

Will anyone ever tire of the view from the Bonatti? Mont Blanc is much more of a mountain from this side, enormous cliffs, jagged ridges and glaciers hanging ready to tumble. Whilst the Val Ferret has been closed due to worries over an impending glacial avalanche, the route high on our mountain side is a safe distance and height above the risk zone.

At Rifugio Bonatti the TMBers are joined and the busy, cramped hut life familiar to many returns. The previous two weeks will have been relatively tranquil, now it's busy, busy, busy but there's no better place to spend the last night in the mountains.

With luck, clear skies will bless the morning's walk to reach Courmayeur and it would seem churlish not to celebrate with a visit to the gelateria, there's plenty to choose from!

Two weeks, 180km, 80 hours walking time, 14,000 metre ascent and 13,000 metre descent and four Alpine Giants encountered – one heck of an achievement! ■

get inspired

Tim Neill on top of Crib Goch's Crazy Pinnacle,
Snowdonia, Wales.
© Ray Wood

Lightweight axes for your next winter mountaineering or alpine adventure. Refined design and careful material choices result in tools tough enough to cope with demanding use without weighing you down.

The 45cm **Spire Tech** is only 323g. Its bent shaft and machined grips make it ideally suited for more technical terrain. Both models use a high strength steel alloy for the pick, adze and spike.

The **Spire** is available in 55, 60, 65 and 75cm and the **Spire Tech** in 45, 50, and 55cm lengths.





HARNESSES ATTACHMENT

WORDS AND PHOTOS BY TARQUIN SHIPLEY

We always teach our clients an ‘all-day’ knot, such as a figure of eight, when climbing trad and an ‘easy-to-untie-after-loading’ knot, such as a bowline, when sport or indoor climbing. Right? Maybe!

What we want is a safe method of attaching the rope to the harness that is appropriate for the activity that we are undertaking. However, we may be surprised sometimes when we see how other people tie in and our first reaction might be to think they have chosen an unsafe method, as it differs from the way we would do it.

So how do we know what is safe or not? The manufacturer’s harness user instructions are a good place to start. Harnesses (sit/ alpine or full body)¹ have a tie-in point but they often have several different options for attaching the rope. For simplicity, I have called these UK (rope threaded through the waist belt and leg loops), Euro (tied directly into the belay loop – the only method available for a harness such as a DMM Alpine) and screwgate (double opposing screwgate karabiners). You might assume that the last method, screwgate, might be only OK for top-roping or seconding but

TABLE 1

	UK	Euro	Double Screwgate
Mammut	Yes	Yes	Yes
Edelrid	Yes	Yes	Yes
Petzl	Yes	No	Yes
Black Diamond - Sit Harness	Yes	No - explicitly	No
Black Diamond - Alpine	N/A	Yes	No
DMM - Sit Harness	Yes	Yes - but only Alpine	No
DMM - Alpine	N/A	Yes	No
Climbing Technology	Yes	Yes	Yes
Arcteryx	Yes	No - explicitly	No
Ocun - Sit Harness	Yes	No	No
Ocun - Alpine	N/A	Yes	No
Blue Ice	Yes	No	No
Camp	Yes	No	No

Edelrid did confirm to me that it is also OK for lead climbing!

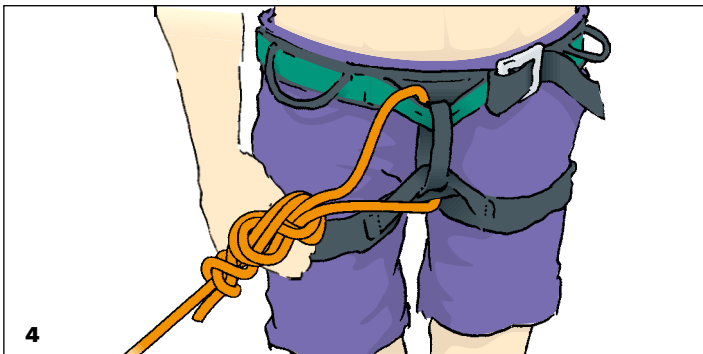
In *Table 1* I have looked at some common manufacturers and which tie in methods they recommend or advise are poor practice or say are unsafe.

You will notice a couple of things. Firstly, all the manufacturers are in agreement that tying in using the UK method is safe. Secondly there is some disagreement between manufacturers about whether it is OK to tie directly into the belay loop of a sit harness. Some say it is a recommended option and some say it is not best practice, but none say it is unsafe.

In the interest of due diligence, I thought I should try the three tie-in methods at my local climbing wall. I was happy to tie into using the “UK” and “Euro” method and, though the “Euro” felt odd, it didn’t stop me from climbing. However, the reversed locking



1. UK method on standard harness. 2. Euro method on standard harness.
3. Screwgate method on Alpine harness. 4. Tying in with a rethreaded figure of 8, illustrated in *Rock climbing* by Libby Peter.



karabiners method was just too much for me and I didn't feel comfortable leaving the ground on the lead connected to the rope. I haven't really been able to rationalise this concern, other than it is large step from what I have always done and the mantra of having fewer links in the safety chain and cross loading karabiners was too deeply ingrained for me to change.

So, what does this mean for us? It should be easy for us to check the user instructions for our own harnesses and check what tie in methods are prescribed and decide whether we need to change anything we do. What's more challenging is dealing with our clients or people we see on the crag or at the wall. It is a great conversation starter introducing the pros and cons to clients of the variety of tie-in methods. Some will want all the detail and some eyes will glaze over, so a tailored approach works best.

Of course, we can't be abreast of the full range of harnesses and their user instructions, but we can have a more open mind as to what is best practice, what is OK and what is actually unsafe. The internet means we can check things quickly if we have doubts. I am not sure leading on a harness connected to a rope with two opposing screwgates is everyone's cup of tea... but it is safe. Could it be safer? Of course – we all know that tying directly into the waist belt and leg loops removes the two karabiners and the belay loop from the safety chain.

Hopefully this will now prompt you to at least glance at the user instructions before they are tossed into the bin and you get on with climbing. ■



Tarquin Shipley is a freelance Winter Mountaineering and Climbing Instructor and member of AMI. Tarquin spends a lot of time in Ogwen trying to work out new scrambling link ups but can also be found occasionally at the Beacon Climbing Centre pulling on plastic.

¹ UIAA/EN standards define 4 types of harnesses (A – Full Body Harness, B – Fully Body Harness for Children, C – Sit Harness, D – Chest Harness).



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ABOVE BMG member Adrian Nelhams replacing some 1991-vintage bolts at Scout Scar on a CPD workshop.

Sustainable Bolting

Very little in this world is truly sustainable in the extremely long term, but as with the obvious sustainability issues of the day, it's arguable that those of us in the world of climbing can and should make a positive difference to another finite natural resource we value so highly – climbable rock.

WORDS BY STUART HALFORD

PHOTOS BY CUMBRIA BOLT FUND UNLESS OTHERWISE CREDITED

With the future of all types of climbing in mind, the context here is the use of new or renewed bolt placements for sport climbing and certain abseil points. Local organisations including clubs, bolt funds and BMC area groups are important sources of information and often where decisions are made about whether and how to bolt or re-bolt a route.

Fundamentally, this two-part series seeks to promote the practice of sustainable bolting, explore its impact on the crag and honestly explain some of the hard but rewarding graft it requires. It draws on a reasonable amount of experience of placing

bolts independently, working alongside volunteer colleagues with Cumbria Bolt Fund, and associated training and formal CPD with AMI and BMG.

Training in the technical and environmental aspects of placing bolts is a current topic of conversation within relevant UK organisations and the UIAA. Available information includes BMC website downloads which provide guidance for installers and users – <https://www.thebmc.co.uk/downloads/Rock%20Climbing/Gear>.

At its heart, sustainable bolting is the skilled installation of appropriate, durable,

replaceable bolts. Cards on the table; I'll gently promote the use of glue-in bolts (resin anchors) in preference to expansion bolts.

In general, I have in mind the precious and limited amount of natural rock available in the UK and Ireland, the small percentage of this where sport climbing is widely accepted and a desire to preserve the rock and keep the climbs thereon in good condition.

Considering other parts of the world gifted with so much more available rock it's easy to see why sustainable bolting



might be a low priority, or even ignored issue. However, in the long term it is relevant everywhere, both for new and existing routes and especially in the case of the most popular climbs.

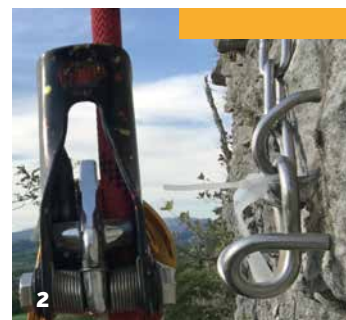
Resin anchors and expansion bolts

The main issue with bolts and sustainability is that because we want them to be really strong and strongly fixed, renewal becomes problematic. Renewal is needed for various reasons including wear, corrosion and rock deterioration. Well-founded doubts over the quality of industrially produced and home-made bolts, re-purposed construction fittings, and the non-compatibility of different metals also make it prudent to renew many placements. Expansion bolts, while cheaper and easier to place than resin anchors, are very difficult to remove. Diamond-tipped core drilling with water cooling is required – an expensive, filthy and time-consuming process which results in the anchor and a core of surrounding rock being removed leaving a sizable hole which may or may not be suitable for re-use. The common alternative is simply to place newer bolts alongside the old, resulting in ‘bolt rash’ – a proliferation of bolts, ‘dead’ bolts and holes. It is fairly straightforward to remove the visible part of any expansion bolt by angle-grinding and possibly driving the stump deeper, smoothing over the resulting hole with resin. However, with the need for future renewal, eventually suitable rock in the optimum position will run out. Another issue with expansion bolts is that they exert an outward pressure (the expansion) on the rock surrounding the hole 24/7 meaning they are potentially damaging to the rock long term, and completely unsuitable in some instances.

By contrast, resin anchors are fixed without

constant pressure and when necessary, can be removed with a bolt-pulling device or other methods leaving the hole intact and suitable to prepare for re-use with a new glue-in bolt. The down sides are that glue-in bolting is more expensive, requires more equipment and takes more time. More skill and effort is needed too – whether this is a disadvantage or rather a difference equating to greater eventual satisfaction perhaps depends on your personal point of view. Cumbria Bolt Fund uses various versions of the ‘twisted leg’ design of bolt from Bolt Products – other manufacturers are available. Invariably, a glue-in anchor and bolt is a single component meaning that the problem of incompatible metals and associated accelerated corrosion is much reduced. There is a lot of available information out there regarding bolt design – in the second instalment of this series I’ll be examining some of these features. Suffice it to say for now that different designs and lengths suit different rock types, positions and environments and it’s important to understand what’s what, just as you would with any gear on a trad climb; the difference being that on a sport route, you’re placing the gear for everyone coming after you too.

I hope to have advanced the case for sustainable bolting practice and set the scene for part two of this series which will dive deeper into some aspects of glue-in bolt design as well as the processes, skills and therefore training required to install them well. Relevant practical CPD workshops are in the 2021 calendar (COVID-19 permitting) provided in conjunction with Cumbria Bolt Fund volunteers and equipment. If you have clients who climb, please consider whether any of them would value making a donation to one of the area bolt funds established in recent years. ■



1. A day’s bolting work usually begins with a heavy carry – AMI Members Stuart Halford and Dan Robinson off to put a shift in at Scout Scar, Cumbria. 2. A newly installed lower-off with its plastic ‘these bolts are setting – do not use’. © Stuart Halford. 3. Just some of the products available from one glue-in bolt manufacturer. There is a lot to be understood before making your choice.



Stuart Halford is a Winter Mountaineering and Climbing Instructor based in Cumbria. He works on an associate basis as an instructor in the mountains and on corporate personal development programmes. A lover of cold environments, Stuart is Operations Manager for GELCO (Greenland Exploration & Logistics Consultancy) and spends time in the Arctic each year as basecamp manager, ski expedition leader and snowmobile guide.

In this article I hope to provide some ideas of how instructors can help their students and groups to warm up at the crag, which will prepare people mentally for the planned exercise and help prevent injury.

WORDS BY TOM HORROCKS, PHOTOS BY SAM CORBETT

WARMING UP AT THE CRAG



In this article I hope to provide some ideas of how instructors can help their students and groups to warm up at the crag, which will prepare people mentally for the planned exercise and help prevent injury.

The exercises described below could be used with both performance climbers and young students, however it is up to you to decide which ones you use depending on the situation that day and the needs of the group.

To help you structure your warm-ups and decide which exercises to use, I have included a format used by fitness coaches around the world. Also included are some considerations geared towards a regular climbing day which should help you choose which elements of the warm-up you will incorporate into the day.

During periods of warmer weather and with the benefit of a long or steep approach to the climbing spot; a physical warm up may not be as important for instructors to spend time on as a mental warm-up connecting the brain to the muscles and types of movement they are about to experience.

For the rest of the year when conditions are not optimal and people can get cold at the base of the climb or during a belay stance – especially for short approaches and group climbing when there can be some waiting around between activity – it can be beneficial to have a few warming-up techniques to energise climbers, and provide an extra level of coaching knowledge and instruction...

You also may choose to conduct a warm-up after a lunch break, when muscles have cooled down and jumping back onto a hard climb may cause a strain.

Why should we warm up?

- Blood flow to the muscles
- Activation of muscle groups
- Prevent straining muscles and tendons
- Mental preparation of activity

The **RAMP** warm-up method was developed by Dr. Ian Jeffreys. It allows for an efficient and progressive warm up that focusses not only on preparation for the session ahead but also the longer-term development process.

By following this process, you can be sure to have students primed and ready for activity. You may also only cover elements of the RAMP method by asking yourself these questions:

Some considerations:

- How long is the approach?
- How cold is it?
- Age/fitness of climbers? Restrictive mobility and older students will need more time to warm up.
- How technical is the climbing? For example, a finger crack can put a lot of pressure onto joints and tendons not yet prepared for activity..
- Current climbing ability compared to the given route. How prepared do your students need to be? By comparison, you wouldn't ask a student in the gym to lift a heavy weight without proper preparation.

RAISE HEART RATE AND BLOOD PRESSURE

This could be completed from the initial walk-in or approach. Alternatively, the 'arms pumping in pairs' exercise is a great way to keep people warm and generate blood flow and muscle activation in a short period of time with little space. Stand facing your partner and hold onto each other's hands. With your palms facing up and your partners' palms facing down, hold onto each other's fingers. Now pump the arms forward and back as hard and fast as possible. This may not be a good exercise for social distancing, but it is a good ice breaker!



ACTIVATE KEY MUSCLE GROUPS

What muscles are going to be used while climbing? Calf muscles will have been activated with an approach, but other soft tissues may not have been activated yet.

These include:

- Fingers and forearms
- Shoulders
- Back muscles used when pulling and pushing. These muscles also connect to the shoulder and scapula often used when climbing.

Here are some example exercises you may use:

- Fist clenches and spread (clench fists for one second and then spread fingers as much as possible!)
- Arm circles (use full range of movement)
- Band pull apart (scapular retraction)
- Band press

Follow images 2, 3 and 4 for a band warm-up sequence.

MOBILISE JOINTS

What joints are being used for the activity? By stimulating the key joints being used with light exercise we stimulate blood flow and heat, helping to prevent injury and increase range of movement. For instance,

trying to perform a high step when cold will be much harder than having warmed up and stretched the legs and hips.

Joints being used while climbing:

- Hips (for high steps)
- Knees (used when stepping up or down)
- Shoulder and elbows (used during any push or pull movements)
- Fingers (a mixture of tendons and joints)

Example exercises you may use for these:

- Hug knee (Hug the knee into the chest while standing)
- Open close gate (lift knee in-front of hips and rotate to the side of the body trying to keep hips forward)
- Press ups (Use a rock or ground to adjust the level of intensity for the student)
- Finger isolation stretch

POTENTIATE/PERFORMANCE

Getting the mind and body ready for the demand of the activity. I like to get as specific as possible to the activity, such as doing some low-level bouldering/climbing. Or try 'follow the leader' activity over rocks often at the bottom of crags. The movement in mantling rocks and using arms will get

the students ready for the real thing. Also traversing skills at the base of the crag is very specific and engaging if there is a safe place to do so.

Incorporating the warm-up into the activity is also a great way of saving time. Even flaking out the rope is a great workout for the shoulders if done fast rather than slowly: students can be directed to keep flaking with alternative arms, getting them to try doing short and fast, or long and slow, hand release of the rope. They will soon find their shoulders burning with the mixture of speed and range of movement.

Remember

Keep it specific to the activity and try to progressively increase the intensity of the exercise throughout the warm-up. ■



Tom Horrocks is a Mountain Athlete Coach and founder of Adventure Fitness Consultants. He holds the Mountaineering and Climbing Instructor

qualification and is a Winter Mountain Leader and Level 4 Strength and Conditioning coach.

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SCIENCE and NAVIGATION

WORDS AND PHOTO BY NIGEL WILLIAMS



Lockdown provided an opportunity to indulge in some reading into the science behind human navigation and thinking about how it might support our approach to teaching navigation skills. Understanding how we might align the terrain, mapping and skills development to the client's experience for the best learning outcomes.

Over the last 80 years cartographers, psychologists, neurologists and others have produced many hundreds of research papers on how humans develop cognitive navigation skills. However, it is only in the last decade or so that the cognitive pathways have become thoroughly understood, largely through Alzheimer research. The research offers clues as to why some clients might find navigation easy whilst others struggle and emphasises the importance of coherent and matching progressions in the terrain, the scale of map and the level of navigation skills. Here is just a sample of the research. <https://www.sciencedirect.com/science/article/pii/S0893608015000040>

Researchers have looked at everything from map symbology and the neurological processes that happen when we experience being lost, to which regions of the brain, down to the individual cells or neurons, influence different elements of cognitive navigation. They've also looked at whether habitual reliance on GPS technology stifles the development of the cognitive navigation regions of the brain (it appears this is the case), and inevitably, are men or women better navigators?

There is no definitive answer to that last one, it appears that both can navigate effectively but may go about the task differently and understanding that may be useful for trainers, assessors and candidates. A summary of that research is here: <https://www.psychologytoday.com/gb/blog/sexual-personalities/201601/where-s-the-nearest-starbucks-sex-differences-in-wayfinding>

It is worth considering that our standard 2-dimensional maps and their symbology were traditionally developed by men. Men do seem to be more navigationally efficient than women when using them. However, in a number of studies in an urban setting women have out-performed men when using 3D mapping (a type of picture map) making fewer mistakes and observing a greater number of landmarks

and their detail. It appears that women rely more than men on landmarks, men rely more than women on spatial information such as distance and direction. This may have teaching, terrain and mapping choice implications for instructors. The different approaches may be evident when employing relocation strategies to help confirm a location, women are likely to want to check the last observed landmarks whilst men are more likely to attempt to calculate their location on the spot. Both can work and it is likely that successful male and female navigators effectively combine the different approaches.

Spatial awareness is key to our ability to create and use our mental maps. It develops from birth and is fundamental to human function. Early years access and freedom to explore unfamiliar objects and environments along with outdoor adventures actively develops our cognitive navigation processes. This freedom may be influenced by social circumstances and gender but also raises a question as to the value of on-line navigation training (much discussed during lockdown). It also provides evidence for outdoor education helping with neurological development, whilst society becomes increasingly less comfortable with youngsters exploring independently.

The negative impact that habitual use of the GPS has on developing the cognitive navigation processes is another emerging concern. After millennia of engaging with the countryside to develop our cognitive mapping, in just 30 years we are in danger of giving that up for reliance on a screen which uses a completely different area of the brain, blocking the neurological processes of cognitive navigation and wayfinding. We may in future observe a greater mismatch between declared mountain experience and traditional navigation skills, requiring more of a back-to-basics teaching environment and approach for experienced walkers.

The research identifies four main areas of the brain involved with

TECHNICAL SKILLS

navigation each with a different function; boundary cells, grid cells, place cells and head direction cells. They effectively provide the tools of navigation that we relied on before maps, compasses, distance measurements etc. They work in unison to help us create and use our mental mapping stored in the hippocampus area of the brain which is key to our memory. MRI brain scans of London Cabbies show their hippocampus enlarging beyond the expected norms during the years it takes them to learn thousands of streets, routes and points of interest in central London (“The Knowledge”) without the use of GPS.

There appears to be a relationship between these neurological processes and the sequence of how mammals, including humans, go about exploring new surroundings, fundamentally to reduce the chances and consequences of getting lost. It appears we are wired to first explore boundaries or linear features e.g. paths, but probably water courses for early humans. Then explore short cross-country legs away from or between known linear features, building a mental map of landmarks, distances and directions. Eventually that would increase confidence for random cross-country travel. I highlighted similar stages of terrain progressions matching the learning of navigation skills in an Autumn 2019 *The Professional Mountaineer* article exploring compass progressions.

Developing terrain experience, supports the development of our spatial awareness, mental mapping, and wayfinding ability. This is why quality mountain days are so essential, not so much as an indication of navigational ability but preparing the neurological ground work and terrain confidence, in order to effectively develop the relevant navigation skills for each stage.

Many research papers point out that navigation is a very complex neurological process. They also highlight the importance of confidence which is entwined with decision making which is key to effective navigation. Of course, that also opens us up to heuristic biases – following what appears to be the more trodden path, perhaps?

Just one of many mini tasks the brain has to overcome is conflicting orientation of information on a map between symbols and writing. The brain uses energy to function and in novice navigators will revert to using the least amount of energy – reading words. Using symbols (which can be read anyway up) requires experience of representative terrain in order to visualise and create a mental map. This is a good example of why orienteering maps which don't have words across the mapping are a valuable novice learning tool. The brain is not distracted by irrelevant mapping information. Also there are many more identifiable confidence-building landmarks on this type of map to develop observation skills within a relatively small area, which reduces anxiety of becoming lost.

When completely lost without directional clues or reference landmarks, our mental map has effectively gone. It creates a

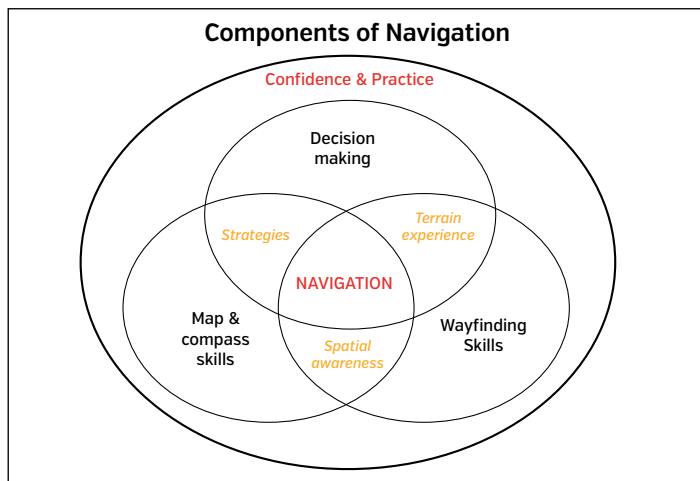


FIGURE 1. Components of navigation. © Nigel Williams.

distressing and deeply rooted human emotion that causes our brain to override rational thinking and decision making, which can put us in further danger. Our first experience of this is commonly as a toddler in the super market, we lack the mental map to even point in the direction of the car park. As we get older and gain more experience of our wider surroundings and landmarks our mental map expands, we gain confidence and are able to rationalise the anxiety of being lost, ultimately to the point of coping in a whiteout. It is developed through direct experience and confidence.

Navigation is a complex combination of skills and experience. I have tried to capture it all in a simple model to represent the relationships between the main elements as shown in *figure 1*.

The science can help us observe the differences in how people manage navigation tasks and enable us to better analyse the reasoning behind their success or struggles.

It should inform our approach to teaching and developing navigation skills and confidence. The choice of teaching venue/ terrain and map scale should be aligned to the learner's outdoor experience. Those elements should then influence the teaching of appropriate navigation skills to build confidence and success. In short, a little knowledge of the science can help us offer a greater level of individualised navigation training, empathy and advice for our clients. ■



Nigel Williams is the former Head of Training at Glenmore Lodge. He is a Winter Mountaineering and Climbing Instructor and L3 Orienteering Coach and is author of the book *Teaching Navigation practical ideas for outdoor tutors*. He is also on the Board of the National Navigation Award Scheme and an Associate Member of the Royal Institute of Navigation.

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MOUNTAIN HARE

The twenty-second in a series of articles on wildlife.

WORDS BY SUE HAYSOM



Let's hear it for the mountain hare, our only native British lagomorph (rabbits and hares). They're also our only truly montane mammal and are mostly restricted to Scotland's high ground (generally above 300 to 400m). That said, they have a circumpolar distribution as they're considered to be the same species as Arctic and Greenland hare. Outside of Scotland they mainly occupy boreal forest where their alternative names: blue hares, white hares or snow hares, seem more fitting.

The white hare and snow hare names come from their winter coat colour which changes from a bluey grey (according to the books, but fairly brown looking to me) in late spring to early autumn, which provides good camouflage against heather, to white from late autumn to early spring for camouflage in snow. Recent research¹ has found that as climate change continues there's an increasing mismatch between the hares' coat colour and their backdrop. The shift in the former is triggered by day length which retains its usual pattern whereas our climate is warming – so we have fewer snow days. The study looked at data from the northeast and central Scottish Highlands comparing the 1950s and 2016. It found there are now 35 more days when mostly white hares inhabit snowless backgrounds. Snow cover is expected to continue to decline, so Scottish mountain hares are likely to increasingly stand out like sore thumbs.

They may look cute, but these beasts are tough. I once turned back from a solo trip in particularly tough conditions as a result of meeting a hare. Trudging through a whiteout I almost trod on it laying up in its form (a shallow scrape in the

ground, or in this case, snow). Figuring that if a highly adapted montane species was reluctant to expose itself to the elements that day then I should watch, learn and head back to the car. Another hill, another season, I was outrun by a three-legged hare on a boulder field. It had made the canny decision to shift into this habitat which was sub-optimal for foraging but had plenty of hiding places from the golden eagle that soared overhead.

Aside from their natural predators (golden eagle take both adults and young; foxes, stoats, wildcats and buzzards take leverets) they're shot for sport and pest control. In high densities they can damage young trees, and grouse managers cull them to control ticks which have a negative impact on grouse directly and indirectly through disease. This is controversial since other species (sheep, deer and small mammals) also harbour tick and we don't yet have a robust estimate of hare population sizes which can fluctuate markedly over ten years. New counting methods are being developed and an exciting citizen science project is being rolled out soon – a chance to get involved.

Q What can *you* do for mountain hares?

A Look out for the citizen science project launching in spring 2021 and download the **Mammal Mapper** app in order to participate.

A Reduce your personal and professional carbon footprint and encourage your clients to do the same.

Q What can mountain hares do for *you*?

A Give you an opportunity to discuss local signs of climate change – 37 days fewer annual snow cover since 1960. ■

ABOVE Mountain hare with its winter coat on. © Lorne Gill/SNH.

Vital Statistics

Size: 45 – 55 cm in Scotland; 52 – 56 cm in Ireland.

Weight: 2.5 – 3.5kg (females slightly heavier than males).

Habitat: Upland & heather moorland, particularly where managed by burning in strips for red grouse.

Food: Heather, grasses, rushes and sedges.



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

¹ Zimova M, Giery ST, Newey S, Nowak JJ, Spencer M, Mills LS. (2020) Lack of phenological shift leads to increased camouflage mismatch in mountain hares. *Proc. R. Soc. B* 287: 20201786. <https://doi.org/10.1098/rspb.2020.1786>



The trouble with LICHEN

WORDS AND PHOTOS (UNLESS OTHERWISE CREDITED) BY NATHAN CHRISMAS

Rare lichen. The Trouble With Lichen. Lichen Chimney, Lichen Slab, Lichen Wall, Lichen Groove. Profound Lichen. The abundance of lichen-related route names that can be found in the guidebooks from North Wales to the grit is a fitting testament as to how fundamental these organisms are to the climbing experience.

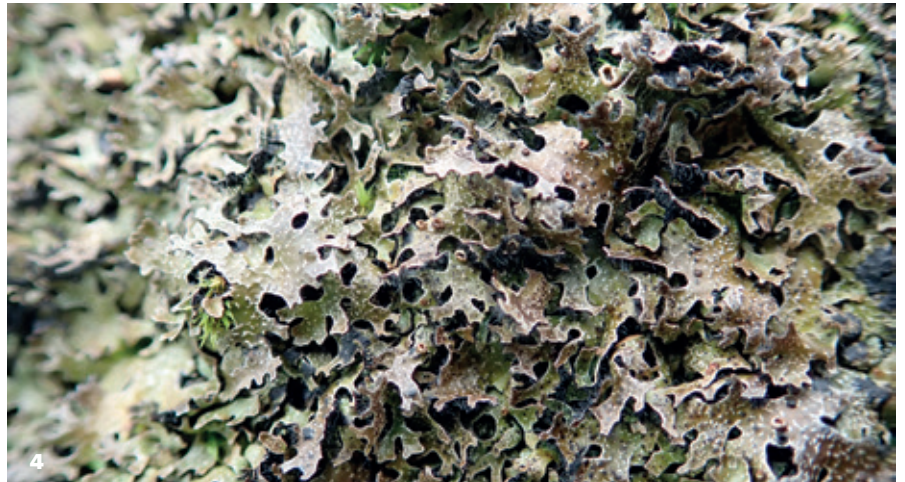
Wherever there are crags, there is lichen. Wherever there are crags, there is climbing. Climbers and lichens are inextricably linked, existing in the same vertical world, exposed to the elements and clinging to the rock.

Biologically, lichens are fascinating. A partnership between fungi and algae – the former deriving its energy from and offering protection to the latter – the lichen relationship was the very thing for which the word ‘symbiosis’ was invented. It’s this unique ecology, carrying the food source within the body, that allows lichens to survive where nothing else can, gripping onto bare rock faces from the tropics to the poles. They are fantastically diverse; well over a thousand lichen species are known in the UK, with new ones still being identified.

Once you begin to really see lichens, they appear everywhere. An otherwise featureless boulder is suddenly revealed to be bursting with life. White smudges become crustose *Ochrolechia*, generic ‘moss’ morphs into foliose *Parmelia*. Strange coralline growths turn out to be fruticose *Sphaerophorus* and *Stereocaulon*. The sense of discovery can be intoxicating, and for many amateur naturalists the study of lichens becomes a lifelong passion. Armed with a guidebook and a hand lens, with each new diagnostic feature learned a door is unlocked to a new level of diversity. One lichen becomes three, each with a subtly different morphology and ecology. With a careful eye, overlooked species can be found in the most benign places, like miraculously finding a new three-star route, unclimbed, at your local crag.

Some lichens are remarkably abundant. Every sea cliff aficionado is familiar with the stiff tufts of *Ramalina siliquosa* – Sea Ivory – that carpets the upper pitches of Gogarth and Bosigran, while no Mountain Leader trainee gets away without learning to recognise *Rhizocarpon geographicum*, the Map Lichen. Others are harder to find. The Golden Hair Lichen *Teleoschistes flavicans*, once common, can now only be found in scattered sites above the cliffs of Anglesey, Pembroke, Lundy and West Penwith. Over a hundred lichens are listed as rare or nationally scarce in Cornwall alone, many either threatened or nearing extinction due to habitat loss and pollution. More still are almost certainly yet to be discovered, in existential peril even before reaching the record books.

Climbers tend to be an ecologically aware group of people, but their relationship with their fellow cliff lovers can sometimes be a strained one. Lichens can obscure key holds and gear placements. They can be extremely slippery when wet and the removal of lichens during the development of new routes, and the cleaning of old ones, is commonplace. Once cleaned, regular traffic on popular lines can prevent populations from recovering but the long-term impact of climbing on lichen communities is still not fully understood. While little research appears to have been carried out in the UK, studies from crags around the world have returned mixed results. Many indicate highly localised reduction in lichen biodiversity where climbers are active. Others show no effect at all, while some even show an increase in diversity (although this is likely due to the fact that the pocketed, featured rock preferred by climbers also supports



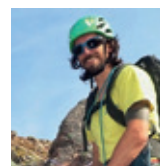
MAIN PHOTO *Rhizocarpon geographicum*.
 1. *Xanthoria parietina*. 2. *Stereocaulon vesuvianum*. 3. *Teloschistes flavicans*.
 © Nigel Chadwick. 4. *Parmelia omphalodes*. 5. *Cladonia* sp.
 6. *Ochrolechia tartarea*.

more lichen species, rather than any growth-promoting properties of sweat, chalk and rubber). The scenario changes from every ecosystem and rock type and, as is often the case in ecology, hard and fast rules are hard to come by amongst myriad interacting factors.

So, what to do? To get the wire brush out on your new project or to leave well alone? The situation is undoubtedly complex, with no clear solution. Encouragingly, it appears likely that the lichen species most at risk of extermination are also the least likely to be removed by climbers – lichens that cause the greatest inconvenience are those that are also highly abundant – but this should be assessed on a crag-by-crag basis. You never know what might be hiding in plain sight right next to that critical crimp. It is perhaps helpful for climbers to know that, by and large, lichenologists are a friendly bunch and contributions to the British Lichen Society

database are encouraged. New records of interesting species from the hard-to-reach places that rock climbers usually frequent are likely to be warmly welcomed. A quick email and a photograph of unusual specimens can sometimes yield an identification on the spot and if more detailed investigation is required, you might have something exciting on your hands!

Indeed, much talk of lichens in the climbing community often revolves around whether or not we *should* be removing lichens from routes, but there is so much more to lichens than being just an inconvenience. Perhaps if we learn to love these fascinating organisms we may find that we no longer *want* to remove them quite as much, instead choosing to interact with these tenacious residents of our cliffs in the same way we might approach difficult or loose terrain; with care, respect, and an appreciation for the challenge that they present to climbers and naturalists alike. ■



Nathan Christmas is an MTA member, environmental scientist, and research associate at the Marine Biological Association of the UK. He can be found as @ **cragology** on Instagram where he regularly posts at the interface of natural history and climbing.

There aren't many places in the UK where you can go walking and not be aware of the presence of, or the impact of, sheep.

WORDS AND PHOTO BY MIKE RAINE

SHEEP in our UPLANDS

ABOVE Sheep sorting pens in Cwm Anafon.

Part one: Introduction

Arguably, sheep have a wider distribution than we do, they aren't fussy, they're as happy on a dull old moor as scaling the slopes of Snowdon or Scafell. But how much do our members really know about our woolly neighbours?

We love to work with the archaeology of sheep, we adore a good sheep fold as a navigational feature, we marvel at the collecting and sorting pens, we might curse the mountain wall one day, but we'll be glad of its shelter on another day. Our day out can be made special when we see sheep dogs at work on the hill. They cover acres of incredibly steep ground and the dogs here in Snowdonia work with little deference to their masters. They run and roam well beyond the reach of communications to chase down even the most errant of stray sheep. It's a fantastic sight to behold. I remember bumping into a young lad on Cnicht, wearing jeans, wellies and carrying a shepherd's crook. He was part of the gathering team and we joined him to watch the action below. Loud shouts in Welsh and with a few swear words in English; eagle eyes picking out the dogs; the sheep hurtling into pinch points to be collected and driven down to Nantmor. Sheep are an integral part of the British hills they've left a rich legacy of human built monuments and a cultural legacy amongst the farming community.

There is some unease today about the sustainability of sheep on our uplands. They eat a lot, and they eat the best bits. Sheep are known as 'patch' grazers and they love the shoots of heather, bilberry, rowan, saxifrages and most of the other flowing plants too. They do, by their selective grazing habit denude the hill and reduce its biodiversity. They don't touch the mat-grass, except maybe when it's young, fresh and green, so this straw-coloured deciduous grass takes over the landscape, as it dies off in the autumn its fallen stems form mats along the ground which stifle the growth of other species. Other unpopular grasses are the purple moor grass, this forms the dreaded tussocks, and the damp-loving soft rush, fine for a tale about rush wicks but not a great plant for birds, insects or walking through. Sheep won't touch bracken, they'll nibble around it but, unlike cattle, they don't trample it and they are wise enough not to eat it.

Yes, sheep are responsible for the state of our uplands. Our hills are

over-grazed and of degraded biodiversity, and this needs to change. But farmers are victims of the system. They have tried to make it work, and many are conscious of skills lost over generations and that nature has suffered alongside the intensification of grazing. We should also note that it is the farming families that get involved in community institutions; they run the shows and fetes, they volunteer to be councillors or school governors, they are the ones who'll tidy up around the war memorial, they'll clear the vegetation around the village sign, they'll loan their trailers, and they'll help each other and anyone living in their village. The farming community and all its associations lays like a blanket over our uplands, a 'blanket' upon which we play out our games, and on which some of us make a living.

Where do we fit in? As a major group of users of the uplands, we as climbers, hillwalkers, mountaineers and boulderers need to make ourselves much more aware of what has gone before and seek ways to influence what might come. We love these places, we see them kempt and unkempt, we see them wild and we see them tamed. We should develop opinions of our own by engaging with farmers and land managers, with conservationists and activists, with politicians, both locally and nationally. We need to find a way of increasing the biodiversity of the uplands, for all our sakes, but we also need to protect the families, the culture and traditions of the upland farming communities. I hear little mention of walking and climbing being a part of the future agricultural policy, I see little opportunity for us to comment on the way 'our' land is used. Should we be more involved? Should we be seeking greater representation? Should we be forming our own opinions? Should we be simply setting out what we'd like to see, and what might that be?

In part two we'll look at the impact of sheep, the industrial revolution and what happens next... ■



Mike Raine is the author of *Nature of Snowdonia* (2020), he runs CPD workshops for Mountain Leaders and Mountaineering and Climbing Instructors. You can find out more at www.mikeraine.co.uk



BUILDING ONLINE PRESENCE

WORDS AND PHOTOS BY KIRSTEN AMOR

ABOVE Now is the best time to review your website and social channels' content performance.

With summer approaching, people are seeking outdoor experiences now more than ever. Adventure companies may welcome this news, but the outdoors industry can be a busy place. Having relevant, fresh, and engaging content online is essential for any company that wants to stand out from the crowd.

With the right online content, outdoors businesses can better target their customers, expand their presence, and increase bookings. Use the content tips below to improve your business's online presence:

1. Examine your SEO strategy

When creating online content, you're writing for two readers: your customers and Google. SEO, which stands for search engine optimisation, is a much-hated acronym, but it's essential for building an online presence. Deciding which keywords or longtail keywords your website's content targets can have a financially positive or negative effect on your business. (For newbies: a keyword is a word or simple 2–3 word phrase, a long-tail keyword is a string of words [usually 4+] that can appear in a Google search).

As an example, countless UK-based adventure companies feature the Three Peaks Challenge as their primary trip offering. According to the SEO tool Semrush, Three Peaks Challenge generates a volume of 9,900 searches a month. However, approximately 103

million URLs are competing to rank for that term on Google. While healthy demand exists for this trip, getting your website to rank on the first page is challenging to say the least!

Don't give up and remove these trips from your website; they're popular for a reason! Instead, check whether your content adequately targets long-tail keywords related to the high-value terms of these popular experiences. Searches around these terms are less frequent, but the commercial user intent ("conversion rate") around them is generally higher. Remember to add the common questions and answers related to these popular trips/keyword terms to your website. You can list these as FAQs at the bottom of your page, and Google will sometimes pull text from these and display them in its search ranking results.

Consider adding niche trips or experiences you offer onto your website, too. They may generate less interest, but it also means fewer competitors and potentially more engaged customers.

Not sure where to start? Depending on your budget, experience, and needs, you can find a range of SEO tools online. Semrush and Ahrefs offer detailed analysis and updates but can be pricey. Check whether your website provider offers SEO plug-ins, such as Yoast, or SEO and analytics services.

2. Diversify your content

Customers increasingly prefer to use mobile for searches, but they are picky about what they want to see. Long paragraphs of text will immediately make them exit your website. If adventure companies promote an experience or their brand online, the structure and



1 AND 2. See what customers are saying about your business online, and share their experiences on your accounts.



diversity of content on their website is key to convincing users to book with them.

Break copy into subheadings, and structure them with the sections most relevant to customer needs appearing towards the top. Ensure the text is easy to skim-read; customers interact with copy differently on a screen compared to a page.

Feature several high-quality images that showcase the breathtaking experiences your trips provide. These images can also manage customer expectations around the type of terrain and accommodation they should expect on the trip, and even what clothing or equipment they should pack. Visual icons can be useful to assist, and direct, navigation.

Videos can be expensive to produce, but they are effective. On average, people spend 2.6x more time on a page with video than one without. Software company Unbounce states including a video on your landing page can boost your conversion rate by up to 80%. If you decide a video is an ideal format to promote your business or trip, keep it under two minutes long and optimise it for mobile viewing (e.g. consider subtitles for volume-off viewing).

3. Consider social proofing

Whenever customers scan a website, they are looking for cues that confirm the company is legit and offers what they want. Adding social proofing content to your website is a simple update that can help promote trust in potential customers and manage their expectations.

You can display reviews, customer testimonials or star ratings on your trip pages. If a publication features your company or a specific trip of yours, mention this on your website, too. Many websites have an 'As seen in...' banner on their homepage.

Avoid excessively calling yourself an expert on your website. Far from instilling trust, it raises suspicion with customers that you're trying too hard. Instead, highlight your years of experience working in the field, your qualifications, or any achievements you've had in the outdoors industry. These are the 'trust beacons' that people subconsciously seek to verify whether a company is trustworthy.

4. Include pricing and instant booking options where possible

Convenience is one of the most influential factors for customers. Consider when you have searched for an item or service online: at the bus stop, waiting for the kettle to boil, during an ad break, etc. Everyone's time and attention spans are short, meaning businesses have a small window of opportunity to sell their services to customers.

People will only send emails asking for a price list or availability as a last resort. Where possible, list your prices and be transparent about what is/isn't included in the cost, and include an instant booking button where possible on your site.

5. Incorporate user-generated content

Sharing posts from your customers' experiences on your trips on your company's own social media channels is a useful tool for building engagement with your brand online. Not only that, but it's a simple way to incorporate social proofing into your communication channels. Like word-of-mouth, user-generated content enables potential customers to see evidence of somebody experiencing your trips and confirming they met or exceeded their expectations. It instils trust in new customers with minimal effort from you. Conversely, respond quickly and politely to any negative comments or feedback, ideally before anything appears on the internet.

From the perspective of time and financial constraints, user-generated content gives businesses new, relevant material for their social channels with little investment from themselves. Just be polite and ask your customer for permission to share their posts first and remember to tag them too! ■



Kirsten Amor is a Mountain Leader trainee, member of MTA and an editor and writer. In her 10 years of experience, she has written for a variety of brands and publications, such as Booking.com, *BBC Wildlife* magazine, and *The Sunday Times Travel Magazine*. You can discover more of her work at: www.amorexplora.co.uk



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MAKING THE MOST of your Met Office app

WORDS BY RON HOLT

An enjoyable experience in the British hills and mountains is often dictated to by the British weather. Therefore, when planning a trip it's important to take account of the weather conditions prior to its undertaking. The Meteorological [Met] Office, with its suite of supercomputers, provides detailed information not just on the prevailing conditions but long-term forecasts that are aimed specifically at walkers, mountaineers and expedition groups, in all key areas of the UK.

As we are all too aware, the British weather is fickle. As an island its northerly location makes it prone to a great many low-pressure areas sweeping in from the West and bringing with it a considerable amount of cloud and rain. It is not uncommon for us to experience all four seasons of weather in one day, but having said that, we have also been fortunate to experience long periods of stable conditions, even though these tend to be few and far between. For those of us who venture into the mountains, whether as a walker, or mountaineer or as part of an expeditions group, as if the terrain was not often demanding enough, we must also contend with the weather. Depending on our location this can vary from one hour to the next or from one mountain top to another. We need to be prepared for dramatic changes in weather conditions as we fulfil our planned day out or make decisions about possible alternative routes. So, organising a days' adventure needs to be well planned, and this includes a detailed look at the weather, particularly noting what the previous days weather has been and what the next few days' forecast is likely to be.

The Met Office, established in 1854, has been providing weather information and forecasts since 1861 with increasing accuracy and precision. Whilst there are numerous other weather sites and apps that cover both local and national areas, providing a plethora of information, the Met Office has produced two clear, and easy to understand platforms that are ideally suited to those who venture into the hills and mountains.

The App

The Met app is free and easy to download to smart phones and tablets. It allows you to see the weather across several locations and the current chart gives the forecast every hour with the expected precipitation (as a percentage) and the temperature over the next 24-hour period. When viewing the full forecast, the table of values includes the wind speed and direction and what the temperature 'feels like' when adding in the wind factor. This is given as a forecast over the next seven days. The full forecast also gives times for sunrise and sunset, a UV forecast, a pollen indicator and air pollution index for the current day as well as providing details of pressure, humidity and visibility. Perhaps more importantly it provides an interactive weather map that shows three critical conditions that are important: rainfall, surface pressure and weather warnings. These can be accessed individually and show how these conditions have changed from your current time for the last six hours and for the next 24 hours. The interactive rainfall map can be expanded or contracted to view the radar image over a larger or more localised area and the clip

will run automatically if you so wish. On the other hand, the surface pressure map has limited expansion/contraction capabilities but does include isobars and any frontal system that may be passing (hot, cold or occluded). It is possible to view the changes manually covering the next four days. Severe weather warnings provide details on the map of their location and expanse as well as their likely severity and forecast. Finally, at the end of the app there is a written but brief regional forecast for the local area. The locations can be specific e.g. Kendal, or they may include many of the main summit peaks e.g. Snowdon summit.

The Mountain Weather Forecast

For a more detailed and specific forecast it is more appropriate to gain access to the *Mountain Weather Forecast* area of the Met Office website, and this is accessed via metoffice.gov.uk, and clicking on 'Specialist Forecast' followed by 'Mountain'.

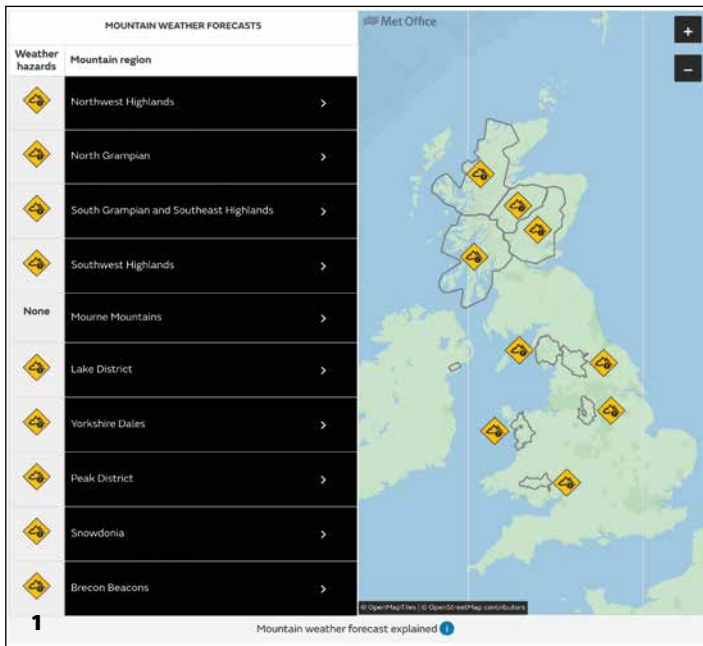
Areas covered

It is important to know what key areas are covered; the Mountain Weather Forecast provides forecasts for the following: **The Northwest Highlands** (including Sutherland, Ben Wyvis, Wester Ross, The Cuillin, Glen Affric, Glen Shield and Knoydart); **North Grampian** (including North and West Cairngorms National Park, Monadhliath, Ben Alder, Creag Meagaidh, Loch Eric and Loch Rannoch); **South Grampian and the Southeast Highlands**, (including South and East Cairngorm National Park, Aberdeenshire and Angus Hills, Ben Vrackie, Ben Lawers, Loch Tay and Ochils); **Snowdonia and the Brecon Beacons National Parks**; **the Peak District, Lake District and the Yorkshire Dales National Parks**, and the **Mourne Mountains** in Northern Ireland.

The forecasts that are provided can be divided into two sections; the first is for a more general forecast for the area of interest e.g. Yorkshire Dales, whilst the second is for a location-specific or even summit-specific forecast e.g. Capel Curig or Y Garn.

General area forecast

On entering this section any mountain weather hazards (these apply at or above 300 metres) are highlighted and these are categorised with a low, medium or high likelihood. Below this is a mountain weather forecast showing precipitation, wind speed and direction, temperature, 'feels-like' temperature, and this is given as a function of altitude above sea level, and at 3 hourly intervals covering daylight hours. The temperature table also includes the freezing level height which is the height above which the ground can be expected to be



1. The key areas covered by the Mountain Weather Forecast. © Crown Copyright, Met Office © OpenStreetMap contributors. © MapTiler.

TEMPERATURE (°C)

Altitude above mean sea level

	06:00	09:00	12:00	15:00	18:00	21:00
600m	4*	3*	3*	3*	3*	2*
300m	6*	5*	6*	6*	4*	3*
Valley	7*	6*	8*	7*	4*	4*
FREEZING LEVEL	1,000m	900m	900m	900m	1,000m	1,000m

2

2. Table showing temperature variation as a function of height above sea level at 3 hourly intervals © Crown Copyright, Met Office.



3. The summit specific map of the Yorkshire Dales. These include summits as well as key places of interest when expanded.

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frozen or for snow to settle. Underneath the tables there is also a written forecast including the meteorologist's view providing any further and important additional information. In this section it is also possible to obtain an overview of the weather conditions for the following day with a brief outlook available beyond that.

Summit-specific forecast

The location map below the tables allows for a seven-day detailed forecast for either places of interest or for specific summits within the chosen forecast region. The tables provide details pertaining to precipitation, temperature, 'feels-like' temperature, wind speed and direction, wind gusts, visibility, humidity and UV conditions until midnight, with similar information being provided for the next seven days. This is accompanied by a detailed weather map centred at your chosen point of interest. This map conveys all relevant weather details one at a time from temperature, pressure and wind to rainfall, wind gusts and pollen index. Like on the App, the map can be either shrunk to convey a more localised area or expanded to view regional variations. The map also allows you to view a five-day forecast. Both the App and the Mountain Weather Forecast are extremely useful aids when planning a day out in the hills. The App is useful because simple clicks can access updated key information. The Mountain Weather Forecast is perhaps the best guide to use when planning ahead as it gives all the necessary information that is needed to ensure you are fully aware of the likely conditions to be met (no pun intended).

The future of weather forecasting

Currently the Met Office already uses one of the most powerful supercomputers in the world that is dedicated to weather and climate. However, in February 2020 a huge investment was announced to create the world's best dedicated supercomputer, so by 2022 we should all benefit from an even better weather forecasting service. The weather looks set to remain variable however, so if the forecast looks miserable it may be better to plan a different and safer route or perhaps sit it out with a cup of tea and wait until the weather improves! ■



Dr Ron Holt is a member of BAIML and has led several high-altitude expeditions for Jagged Globe. He is a physicist, teacher and author and runs bespoke navigational courses in and around the Peak District National Park.

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Developing Teaching and Learning Skills # 4

The forth and final article in our series looks at our reviewing and reflection skills.

WORDS BY PAUL SMITH AND DAN WILKINSON

Reviewing

Making time to review our sessions is just as important as any other element in the learning process. It is so tempting to squeeze another summit in, another route or another boulder problem, especially when the weather is good and our clients are enjoying themselves. If the client(s) has signed up for a guided experience, then perfect, keep going! If they are looking to you to support them achieving some longer-term goals, then reviewing and recapping the learning from the day has several benefits.

In order to conduct a review there are several considerations that we have to balance, to get the most from the review session.

Figure 1 gives an overview of how to effectively reflect with a group. Session reviews have several key outcomes:

- Ensure that the learning from the day is re-enforced, embedding it further into the long-term memory of clients.
- Embed the learning from the day into existing knowledge and experience.
- An opportunity to check that the information from the day is clear.
- To gather information for our own reflective practice.
- They allow us to action-plan for future development.

As with all the information we are trying to generate, the more engaged the clients are the more they will recall. A discussion is often the most practical, but we should be encouraging people to record, reflect and revisit. An option is to get the clients to create a mind map of their learning from the session (or series of sessions). You can

then prompt their reflections to further explore their memories, and ensure that key information is captured. As the information is recorded, they can revisit it as they wish, ensuring that the message they take away is as clear as it can be. This has the benefit of allowing you to see specifically what can be recalled as well as the priority that the clients have placed on individual areas. It will also aid you with your own reflective practice, by creating measurable evidence. There are multiple ways of recording the learning from the day, but we should be aiming to ensure that our clients can re-visit it in their own time.

How to action plan

A recorded action plan is one of the most important things that can help your clients to achieve their goals. This should be created in conjunction with you, and include the following:

- Clearly defined end point – what does achievement look like?
- Create a prioritised list of actions that lead to the goal – what needs to happen and in what sequence?
- Set deadlines – what is going to have happened by when?
- Identify resources that are needed – do we need to find more time to achieve our deadlines? Travel to the mountains? A lead rope?
- Identify the life changes that are required in order to make the plan fit into your life.
- Display the plan somewhere prominent – it's no good having a beautiful plan if it's tucked away in the bottom of your rope bag. Put it on the fridge or somewhere else prominent.

- Monitor and evaluate – are the milestones being met? If not, then its time to revisit the deadlines to make them more realistic.

Encourage your clients to keep re-visiting their action plan. It will help them to ensure that their practice is purposeful, and will encourage them out of their comfortable areas of practice. A diary or other record can be encouraged so they can track their progress and identify when they require more technical input to keep the pace of development they have set themselves.

Reflective practice

The importance of our reflective practice is becoming more prominent as more work is done on how we develop as professionals. It helps us to develop, amongst other things, our self-awareness, awareness of others, our critical thinking skills, our judgement and decision making and our professional competencies.

Current thinking on reflective practice identifies four times when reflection can occur.

- 'On action' – Immediately after a session or during the drive home from a debrief.
- 'For action' – Using our previous experiences to plan and anticipate where our session may go.
- 'In action' – Our in the moment thinking, and which feeds into our decision making, especially when our expectations are not being matched with reality.
- 'Retrospective on action' – Occurs a while after the event, and the reflections cannot impact on the session(s) they were about, but can help us unpick why we chose certain courses of actions.

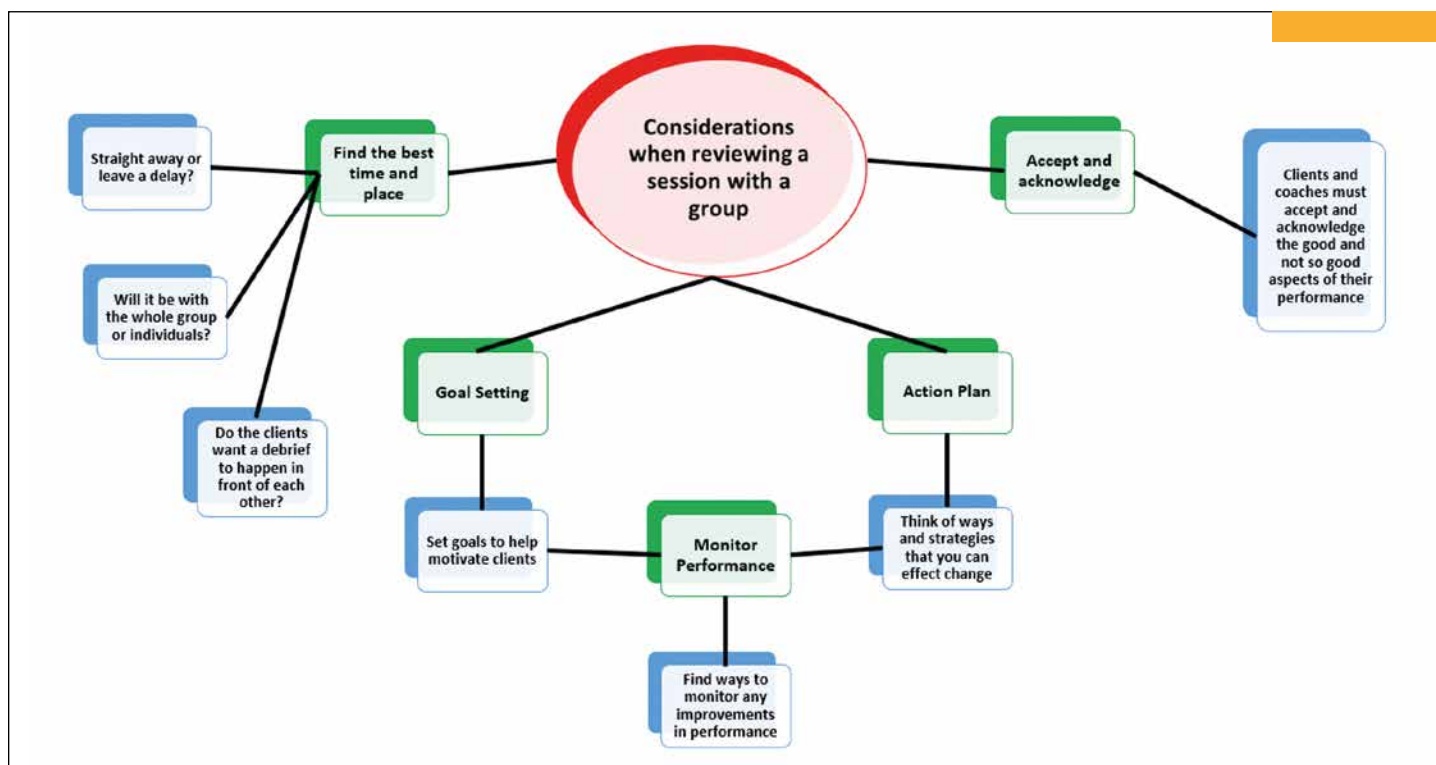


FIGURE 1.

If we take our time to record in some format our reflections, then this can provide a trigger for when we have the space and time to engage in retrospective reflection on action. There are many excellent ways of recording your reflections. Indeed in some professions it is part of their professional evidence to maintain a reflective diary.

When undertaking reflection we should also consider the qualities of our reflections. As we become more skilful at reflecting we can draw more information into our reflections, and consider the same experience from multiple angles.

We have taken a whistle-stop tour through several key areas in this series of articles. Each of the sub-headings has a whole world of academic research, literary publications and different schools of thought as to the effectiveness of different approaches. The underlying message from the series is to recognise that each of your clients is different, as is each of us. The strategies and approaches we choose to utilise should only be judged on their effectiveness each time. Active experimentation with, and reflection on, different approaches helps us to develop. This is key not just for us, but also to encourage the people we are working with. ■

There are many ways that you can reflect, but if it isn't a part of your regular practice then try answering the below questions as a starting point.

For each session and for the overall block of delivery ask yourself:

- Q1. What did you do?
- Q2. How did that impact the client/s?
- Q3. How many other ways could you have done it?
- Q4. Describe them?
- Q5. What factors would have made you choose one of these other methods?
- Q6. What would you do if...?



Paul Smith is a Mountaineering and Climbing Instructor and is a multi-disciplined Adventure Sports Coach and Coach educator. His interest in the teaching and learning process began when attending his first Mountain Training course in 1997. [@paulsmith_coach](#)



Dan Wilkinson is a Winter Mountaineering and Climbing Instructor, British Canoeing Level 5 Coach and has an MSc in Performance Coaching. He has worked in coach education and instructor development for the past decade and is passionate about effective teaching in adventure sports. [@danwilkinsoncoach](#)



ADVENTURE ACTIVITIES AS PART OF THERAPY

Previously, we discussed the potential role that adventure activities can play in developing resilience and coping with loss and grief. In this article we will explore current trends in therapy and showcase some practical applications.

WORDS AND PHOTOS BY
LEE ANNA SIMMONS, UNLESS
OTHERWISE CREDITED

Outdoor instructors can include therapeutic benefits in their work and recognise the value they provide, perhaps linking with mental health professionals for peer support and referral pathways.

The understanding that you put your in-flight oxygen mask on yourself before equipping somebody else, feels pertinent right now. These coming months I advocate we all prioritise our mental health, use our skills to support ourselves and be mindful of what does and doesn't work for us. I hope we can then be prepared to support clients emerging from this unusual time who may have new aims, issues and priorities.

The therapeutic benefits of climbing became pronounced to me after the death of a friend. After a day climbing Cornish sea cliffs, I noticed I'd had some time where I didn't think about it, which surprised me as I had become accustomed to dwelling constantly on the tragedy. Climbing provided relief and also enjoyment that I didn't feel guilty for having.

As a therapist, I have since introduced clients who have suffered a traumatic bereavement to climbing after working with them in the therapy clinic.

Bilateral stimulation

A therapeutic technique I use that is particularly good for helping people come to terms with trauma is EMDR (Eye Movement Desensitisation and Reprocessing), which uses bilateral stimulation to prompt the body and minds' natural healing system. The technique was originated and developed by the American psychologist, Francine Shapiro. The story goes that Shapiro was out walking at a time when she was experiencing her own personal difficulties and noticed that she started to feel better as her eyes moved from one side of the path to the other. She isolated the bilateral eye movements in tests with people suffering from PTSD and found it relieved their symptoms.

The left-right action of EMDR has been used in a number of contexts recently. Some practitioners, including myself, are using it in art therapy, and "walk and talk" is becoming an increasingly acceptable technique for psychotherapy that would conventionally be based in clinic rooms. I've often used river walks with my clients, utilising the left-right action of walking to help with processing. When hiking using poles, I considered this



Lee Anna Simmons is an artist and psychological therapist providing trainings for people at risk of secondary trauma and burnout. She has included climbing in trauma therapy sessions through her small business Social Art Therapy Ltd. based in the UK and working in Albania.
Art practice: www.LASimmons.com
SA&T clinic: SocialArtTherapy.com



MAIN PHOTO Mountain Guides on Mount Dajti, Albania. 1. Hiking in Mount Dajti, with walking poles. © Marinhj Beli 2021. 2. Waterfall in Tirana, Albania.

could enhance the bilateral processing further (as well as taking the pressure off knees...).

I have also used the EMDR protocol with bereaved clients, before introducing them to climbing. I've made a similar transition with adolescents suffering from anxiety and depression. Climbing created a step out of the therapy room, giving my clients something to take away with them and bring into their lives to help fill some of the gap left by the trauma of loss. I am sure the climbing action of "left right left right hands", without using the conscious mind on problems, and having a chat with climbing partners between climbs also have similar healing effects to EMDR.

Cold water therapy

Another adventure activity that is becoming widely recognised for the mental and physical benefits is cold water swimming. The now well-known endurance athlete Wim Hoff turned to ice bathing after his wife's suicide and has since refined and widely shared his techniques, which include a particular method of breath control. A number of therapists and wellbeing practitioners I know have been using his method since lockdown. Neljana Jaze, a yoga practitioner in Albania, finds it brings about a pause in thinking and resets her mood. I mentioned to her that I might include cold water in this article, even though it's not really my thing! She responded "Yes, it's something I can do. The water in Albania isn't that cold but I do what I can by taking cold showers and swimming in winter". We don't all have access to arctic seas, but cold showers are something almost everyone can do.

Oliver Wright, a CBT (Cognitive Behavioural Therapist) and EMDR consultant using Wim Hoff's breathing exercises and cold showers said, 'I'm definitely a fan of the Wim Hoff breathing. For instance, I felt a bit feverish in the night after my Covid vaccine yesterday (normal I'm told) and noticed my heartbeat was about 70. I did three rounds of The Wim Hoff breathing and felt better, with my heartbeat down to about 60. I've also noticed that every time I feel cold or have a blocked nose, I do a few rounds of the breathing and my nose or head clears. I think if you've only got 30 seconds to survive your body decides to shut down un-needed inflammation.' Although Wim Hoff is not without his critics, the physiological and mental health benefits he describes are being scientifically tested, as he describes on his website.

Giles Story, a psychiatrist and psychotherapist, finds that wild swimming can have symbolic as well as physiological effects. As he puts it, "Immersion in water beckons us to dissolve and merge with a dimensionless whole. Freud linked this 'oceanic feeling' to a blissful pre-natal state, in which all needs are met, a state he thought was the root of religious ecstasy". For Giles, it's little surprise that people turn to cold-water therapy in response to grief or depression

"The feeling of immersion can also have a darker side. There's a strange allure to surrendering oneself to the elements, with tones of the same soothing voice that calls those dying of hypothermia to lie down and succumb. Of course, the key is not just to surrender, but also to pull oneself out again! Warming up is a wonderful metaphor for recovery from depression".

Blink technique

The Flash or Blink technique is an interesting development in the field of EMDR. It involves a client putting the distressing subject aside and thinking about something they enjoy, whilst slowly tapping their thighs, then interrupting this with a series of blinks. It is outstanding how quickly and effectively distress reduces.

Walking, engaging with the surroundings, talking or thinking briefly about the subject then re-submerging in the activity could have a similar effect from a related method that we naturally orbit to.

In the third and final article in this series I will share some experiences and musings from my work using outdoor activities within a programme of therapy.

References

- EMDR UK Governing Body: <https://emdrassociation.org.uk/>
- Flash technique: <https://flashtechnique.com/>
- Giles Story: <https://www.gilestory.com/>
- Lee Anna Simmons <https://www.lee-simmons.blog>. Lee is sharing her sound files of relaxation techniques and coping strategies on YouTube fortnightly, with the aim of doing this throughout 2021: <https://www.youtube.com/channel/UCgZbGb5P5mKB30R8uaxynyQ>
- Wim Hoff website: <https://www.wimhoffmethod.com/>
- Oliver Wright: <https://www.oliverwright.net/> ■

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Developing a CLIMBER'S POTENTIAL

WORDS BY EDWARD KINNEAR, ROKKA PROJECT CIC

PHOTO BY CLIMBING OUT

Helping an individual to progress from thinking to believing “I can”.

In the winter issue we looked at an exciting process that coaches¹ or individuals with an impairment or disability, can use as a structure to support an inclusive adventure activity; the Decision-Making Framework (DMF).²

This framework was created in the acknowledgement that all coaches of any adventure sport regularly work with individuals with impairments or disabilities – because an impairment can be any temporary or permanent functional limitation.

This article explores how the DMF can play a key part in the complex jigsaw that is required to go beyond developing an effective, efficient and safe session paving the way towards a successful follow-up session.

Self-efficacy³

This key element of Social Cognitive Theory is well-known in coaching, as it relates to the individual's belief in their own abilities to complete a task or achieve a goal. It plays a useful part in supporting and developing an individual's likely participation in a further adventure sport session.

A session therefore is not just about the physical actions, but about the perception and interpretation of the experience.

Research suggests there are five sources of self-efficacy. With the help of the coach an individual can experience all five in one session, increasing the chance of future participation.

Please note that the 5 sources below can be applied to any adventurous activity with individuals with or without impairments or disabilities. The sources just require a small amount of experience and imagination on the part of the coach to identify, develop and implement successfully in their chosen sport and environment.

Imagine a great indoor climbing session

The coach has developed a strong rapport, abilities have been explored, supported and utilised to the max. There are lots of smiles and good discussions around reflective open questions.

- 1 Through the experience of a successful and appropriately challenging session, the individual realises they are capable of learning new skills. Such **mastery** could include anything from identifying their harness in a pile on the floor or putting on a helmet correctly, to reaching the top of an overhanging wall. Each achievement is valid, and all are important to the individual. Working through the stages of the DMF enables the coach to ‘tune-into’ the individual's functionality (ability) and thereby give at appropriate times, positive feedback on their mastery of particular skills; skills that sometimes others (including ourselves) may dismiss or not even be aware of.
- 2 By seeing, hearing or experiencing others with a belief in their own abilities, the individual has role models to witness and emulate, providing a **vicarious** experience. This does not have

to be another individual with the same impairment, it could be a family member, friend, support assistant or inspirational coach. Consider and explore what is happening in the surroundings during the session by:

- Pointing out and making connections with climbing posters or magazines;
- Watching and discussing other climbers' performance;
- Sharing inspirational stories and experiences;
- Facilitating conversations between the individual and other climbers at the venue;
- Enthusing about films that might be playing on phones or big screens.

By taking time to understand the individual's inspiration for being there (Stage 1 of the DMF), coaches have a focus for their facilitation of the various vicarious experiences that are available.

- 3 Verbal persuasion is a strong source of self-efficacy. Coaches should already be conscious of positive and encouraging talk during a session: communicating the right thing, at the right time, in the right place, for the right reason.

However, some considerations to explore here are:

- Do the coach's own energy levels contribute to, or hamper, positive talk?
- In which situations can a coach's positive talk start to fade?
- How much are coaches affected by the performance or behaviour of others?

The reason for focusing on our own thoughts, feelings and behaviours is if we as coaches are unfamiliar with the individual's wishes, concerns and ability, we can be impacted by their performance. Unfortunately, this can create an adverse impact. The DMF specifically ensures opportunities to inspire, reassure, ask and assess; for the benefit of both parties in the climbing relationship.

- 4 The DMF process is designed to minimise focus on negative thoughts and feelings and facilitate a positive performance, as an individual's **psychological and emotional** response to a situation has an influence on their belief in their ability. By sharing and exploring the DMF, the coach can raise the individual's awareness of a process that has worked for them, as well as attributing success to their own effort and energy. Success therefore is not linked to the coach or other extrinsic factors but owned by the individual, who now has a process to take forward to their next session with you, a colleague or another organisation. The more the DMF becomes a common vocabulary used in

¹ Here, a coach refers to a person helping to develop climbing expertise, regardless of qualification, experience, status or reward.

² Gilligan, J. Kinnear, E. Morrison, G. *Inclusive Climbing – a manual for inclusive adventure activities in climbing*. 2020. www.rokka-project.org.

³ Primary principles developed in; Bandura, A. *Self-Efficacy. The exercise of control*. 1997. New York.

⁴ EFDS (now Activity Alliance) *Barriers to participation* report. 2016.



ABOVE The Decision-Making Framework supports the climbing relationship between the individual, the coach and any supporting staff.

the sector, the greater the likelihood that individuals will be psychologically supported in the knowledge that the majority of coaches and providers will be using this successful process with them next time. And by using and sharing the DMF, you are reducing one of the biggest barriers faced by individuals – because “psychological barriers play the biggest role in preventing disabled [or impairment] people taking part in sport”⁴.

- 5 As climbers, we all know the power of **visualisation**. Imagining experiences can provide a source of belief for some individuals. Explore a range of possibilities to help individuals visualise, for example:
- By planting an appropriate metaphor in the ‘inspire and reassure’ stage (Stage 1) and exploring it throughout the session.
 - Stage 3 provides an early opportunity for ‘off the floor’ experiences, ensuring that the equipment fits the person and that there is continuous Support, Sensation and Circulation. This time can be used very effectively to visualise future success, as the individual is feeling and aware of – for the first time – the sensation of the harness, rope suspension, body position, environment etc; all safely and securely six inches off the floor.
 - Making direct requests to “*imagine being up there next week – you have the skills!*”. Coaches can then explore feelings and senses related to the imagined situation to make the visualisation even more powerful. All of the skills potentially stemming from the sharing and explaining of the DMF; all of which helps the individual improve their perception and interpretation of the experience.

There is a lifetime of coaching to explore here! By using the Decision-Making Framework and by focusing on – and playing with – one or two of the sources, you will increase the likelihood of an individual making positive choices to return for another session. ■



Edward Kinneer is a member of AMI and has more than 25 years’ experience as an outdoor professional. His enthusiasm spans climbing, caving, mountain rescue and everything in between. He is co-author of *Inclusive Climbing* – a manual for inclusive adventure activities in climbing. He is also the co-director of Rokka Project CIC – a social enterprise with the vision of inspiring and improving the provision of inclusive climbing and other disability sports in the adventure activity sector. www.rokkaproject.org.



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In 2014, Mountain Training launched the Foundation and Development Coach schemes. But when outdoor qualifications had been around for fifty years at this point, why was there a need to introduce more tickets into the system?

WORDS BY PETE EDWARDS

COACHING VS INSTRUCTION

ABOVE A crucial feature of coaching is allowing students into the decision making aspect of learning. Here, the author coaches at the RAC boulders, North Wales. © Nick Cunliffe.

The first Mountain Training qualification was introduced way back in 1964: the Mountain Leader scheme. The Mountaineering Instructor Certificate followed in 1970; the first Single Pitch qualification in 1990; and the Mountaineering Instructor Award in 1992. Most have now been renamed and revamped but they are by and large the same qualifications we still use today. While the qualification schemes are all forms of education for teaching rock climbing, the differentiating features of these schemes are primarily the terrain in which the learning takes place. They are, in essence, all forms of preparing climbers to *instruct* in the methods of staying safe in the outdoors and climbing environments. What they don't cover are the more specific aspects of learning and that is where the Mountain Training Coaching schemes come in.

For me personally, the development of the coaching scheme and

the creation of the climbing coach was very welcome. As much as I do enjoy introducing people to the sport that has come to define my entire life, the thrill for me is in helping established climbers improve and develop their personal skills and the intricacies found herein. The difference is subtle but crucial. And that is what I'm going to discuss in this piece: what are the roles now available for outdoor professionals? And what are the inherent differences between those roles? Most importantly, how can we use this information to become better educators in our chosen area?

There are no hard and fast definitions of a coach, in any context other than one with rows of seats (and even that might be called a bus)! This article presents my own distinctions of the various roles based on my observations and experiences, backed up with some academic knowledge, before moving away from theory and into

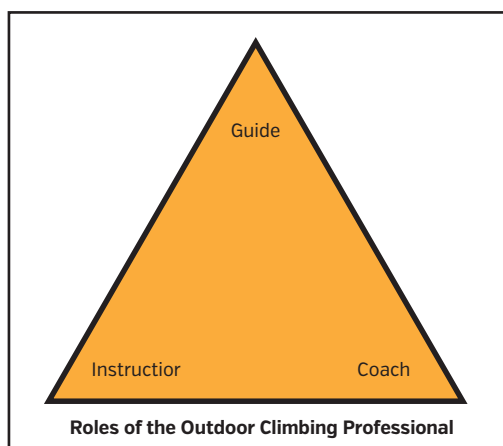


FIGURE 1. Roles of the Outdoor Climbing Professional. The client sits inside the triangle at all times with the professional moving between the roles as needed.

how this information can be used by you to develop your own teaching.

The roles

In essence there appear to be three distinct roles in terms of outdoor mountaineering/climbing professionals. Here are the definitions I have used to differentiate between them:

- A **guide's** primary role is to provide often unique experiences for their individual clients i.e. guiding the client to places they would otherwise not be able to get to on their own. Guiding is possibly the oldest role in mountaineering, dating back to Victorian ascents of Alpine summits.
- An **instructor** is someone whose primary role is a teacher. They will take new or more experienced climbers out and teach them to stay safe, experience climbing for themselves and develop their safe independence. This usually involves the student learning something new such as belaying, route finding or equipment use.
- A **coach** works with climbers who already know the basics and goes into more depth. A coach won't necessarily teach their client something new, instead helping to refine existing skills and teaching their client how to do something better. This could range from refining technique such as footwork, through to the mental aspects of climbing, making strength gains or even developing improved analysis skills, to name but a few.

Notice that there is no specific role for a personal trainer in here. For me, a personal trainer will adopt the qualities of both an instructor and a coach at different times and herein lies an important point: these roles are not fixed, nor do we start a session saying "This week, I will be mostly instructing". Instead, all three roles overlap along a continually evolving spectrum.

Figure 1 gives a pictorial representation

of the roles performed by the outdoor climbing professional. The client will remain inside this spectrum at all times but the professional will move around as needed. A guide will still likely answer questions about their actions if asked, demonstrating how they might be doing something specific. Likewise, a coach may need to introduce a new concept – a specific technique for example – at some point during their session and any good instructor will gladly offer advice on how to refine and improve throughout.

In fact, the roles of instructor and coach overlap wildly, with new ideas and refinement of existing knowledge constantly changing. So with the roles being so similar, why is the distinction so important? It is at this point that we look at another spectrum, related to decision making.

It's a spectrum

There are many models related to the way we view knowledge (the study of knowledge being called *epistemology*), with some demonstrated in Figure 2. However, within my thesis and in my subsequent work and teaching, I refer regularly to the *Spectrum of Teaching Styles* (Mosston & Ashworth, 2008) – see Figure 3.

The Spectrum of Teaching Styles is all related to decision making and works on the basic principle that sport is a series of decisions that must be made by either the teacher or the student. At one end of the spectrum, all the decisions are made by the teacher and this is referred to as Style A or the Command Style. As an example, this may be someone explaining a training regime to use a fingerboard, giving specific holds, times and other details that must all be performed exactly.

Jump to the other end of the spectrum and we find Style K: the Self Teaching Style, whereby the teacher and student are one and the same. For us, this isn't a particularly

useful style to discuss so instead we will stop at Style J: the Learner Initiated Style. Here it is the student who decides on what will be learned, finding subject matter with the teacher being a facilitator to learning and a sounding block as much as a teacher.

In between are a further eight styles that progressively move decision making from the teacher on to the student. The names of the styles can be seen in Figure 3. These include terms you may have come across before, such as Self-Check and Guided Discovery and it is thoroughly recommended to check out the book further, as it is available as a free download from <https://spectrumofteachingstyles.org/>

What you will notice is that there are other aspects marked on Figure 3. The list of styles is broken in half into reproduction styles and production styles, separated by the Discovery Threshold. The reproduction styles primarily involve explanation or demonstration of a principle by the teacher that is to be repeated by the student. The Production Styles, meanwhile, involve the student creating something new for themselves; hence the term discovery.

The non-versus approach

One important point that is stressed heavily in the book is the non-versus approach, whereby no one style is superior to any other. Styles are instead more appropriate at any one time. For example, a guided discovery approach is not the right way to go when teaching someone to tie in to the rope with a figure of eight knot, where safety concerns pervade all teaching goals. A Command Style would be better in this scenario.

However, the weakness of reliance on Reproduction Styles comes when the coach is no longer present. If the student has been prepared to rely on their teacher to make decisions, they are less likely to be able to make these decisions when participating on their own. As Figure 2 demonstrates,

Instruction	Reference	Coaching
Naïve Epistemic Practice	Schommer (1990, 1994)	Sophisticated Epistemic Practice
Pedagogic Approach	McAuliffe, Hargreaves, Winter & Chadwick (2009)	Andragogic Approach
Objectivism	Schommer (1990, 1994)	Constructivism
Transactional		Transformational
Reproduction Teaching Styles	Mosston & Ashworth (2008)	Production Teaching Styles

FIGURE 2. Examples of various academic areas that differentiate instruction and coaching, with references for further reading.

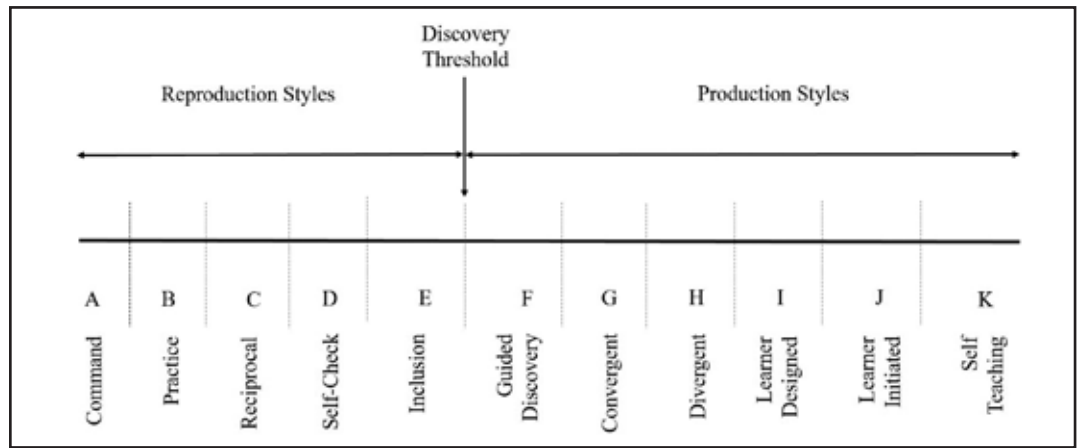


FIGURE 3. The Spectrum of Teaching Styles, recreated from Mosston and Ashworth (2008).

Reproduction Styles are more aligned with transactional learning or a more traditional pedagogic method. By moving into the higher styles, we prepare our students to be able to problem solve of their own accord.

In essence, it is the old adage of not teaching the beta. If we employed reproduction styles to get a client up an 8a sport route, they may well be able to climb the route and say they've climbed 8a but the skills are less likely to be transferable skills, adaptable in other scenarios. The Production Styles involve developing guiding principles that can be reapplied in a variety of settings, thus making our students more robust to change and variables in the future.

This is coaching. The non-versus approach reminds us that typical instruction holds its place in climbing education well and will continue to be highly important in keeping our clients active and, more importantly, safe. However, by investigating and employing coaching techniques in teaching technique, tactics and the mental aspects of climbing, we can develop climbers who can continue to improve long after their session with us has ended.

A multi-discipline advantage

Taking a more coaching style approach needn't be in any particular setting or with any particular group. Indeed, coaching often conjures up very specific images; typically indoors and typically with kids. However, as we've seen, coaching is a far broader term, related to far more than these

narrow parameters, and something that can be applied across multiple disciplines.

While bouldering and sport climbing see their fair share of coaches already, these definitions suggest that trad climbing and even winter climbing and mountaineering have the potential to be the scene of a good coaching session, depending on the goals of the teacher and student. The scene is largely irrelevant, and I am sure that many established outdoor professionals have actually been coaching for years under the guise of instruction or even guiding. Remember back in *Figure 1*, the roles overlap greatly and whether above a pad at Almscliffe or a snow gully on Aonach Mor, if your goal is to develop independent and lifelong learners, coaching may well be an area that is worth some of your time.

Further discussion

This article could continue for many pages but obviously there needs to be a cut-off somewhere. If you are interested in adding a coaching element to your work, consider pursuing the Foundation or Development Coach scheme. While the skills are directed towards specific disciplines and groups, they are indeed transferable skills that can easily be adapted to other areas of climbing.

Should you like to discuss things further, please feel free to contact me through the contact information in the bio. I am always happy to chat theory with fellow educators! Best of psyche to you. ■



Pete Edwards is a professional climbing coach, who runs Prowess Climbing Coaching <https://prowesscoaching.co.uk/> as well as his Chez de la Bloc blog page <https://chezdelabloc.wordpress.com>. He is about to finish a Master's Degree in Elite Performance, investigating the teaching and learning styles used by elite level coaches across the country. Personally, he spent 15 years trying trad, sport and winter climbing before becoming a dedicated boulderer, now with in excess of 700 logged boulder problems across more than 100 crags in 9 countries up to 7c+. He is also a father of two young children.



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GEAR REVIEW

BAM Reflex base layer made by BAM Bamboo Clothing

Review by Stephen Jones



Bamboo, right? I mean, Bamboo? That stuff you make garden canes out of; rigid and prone to make uncomfortable splinters? It's not the first thing that leaps to mind as something to make clothes out of. And let me come clean, I have no idea which part of the bamboo plant they use to make the fabric, or how they process it to achieve their aims, but as I took the garment out of its packaging, the material gave me absolutely no signs of ever having been part of the familiar tall garden plant. It is very smooth, but not silky and it stretches easily in all directions, being 4% Elastene. Add in 28% of organic cotton, and it's still 68% bamboo!

I was sent a long sleeve base layer to try out. It slipped on easily and hugged the body closely (the catalogue uses the word 'sculpted!'), and the immediate sensation on the skin was warmth, rather like you get with merino clothing. Indeed, it behaved in very much the same way when I trialled it between lockdowns, on a cool day. It has all the wicking properties you often read about, despite the presence of cotton in the mix, so I would quite happily wear it across all four seasons. ■

www.bambooclothing.co.uk

Woolpower Full Zip Jacket 400

Review by Iain McIntyre



Having been in lockdown since early January, this jacket has not been used to its full potential. However, worn on a cold damp Yorkshire New Year morning, over a wool t-shirt, the jackets' properties were immediately evident. The terry loop lining gives it a cosy bathrobe feeling, the fit enables good movement, and after more than four hours of log splitting, the top did well regulating my temperature. Later, around the fire, it provided ample warmth against the cold night.

This a mid-weight mid-layer piece, coming in at around 500g. When worn in the mountains this would be an all-day piece for stop-and-start days such as navigation practice. I would also pack it as an insulating layer when weight is not critical. For winter climbing this jacket might work as a mid-layer piece when on belay, but for me it would be too warm to wear in any high-output activities. Weight may be a factor but the "warm and dry even when moist" makes for a compelling property.

For a mid-layer the price is at the upper end; however, reading reviews it is considered an investment piece with the quality of construction meaning a long life of use. At this early stage I'm inclined to agree. ■

www.outweartd.co.uk/our-brands/woolpower/ullfrotte-original-400

BOOK REVIEW



COACHING ADVENTURE SPORTS by Dan Wilkinson and Paul Smith

Reviewed by Guy Jarvis

Coaching is a thinking activity that can seem like a dark art, hard to explain and hard to master. Adventure sports require the coach to perform alongside the participant in a highly dynamic environment, all the time attempting to manipulate some of the

endless variables to maximise safe and effective learning.

Embracing this complex world, Dan and Paul have taken on the huge challenge of describing the universal skills and processes of effective coaching. They have taken knowledge and experience from many sources, especially paddle sport, and applied it to the entire sector with examples from climbing, mountaineering, biking, sailing, skiing and more. I think they have produced a classic, condensing a library of knowledge into one comprehensive text.

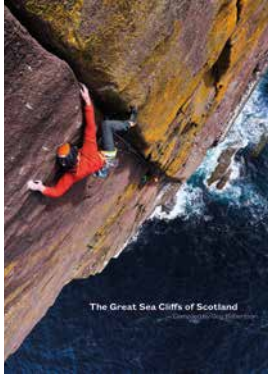
The book's broad sweep describes the common principles and skills required by all coaches; namely delivering the coaching process, managing relationships with their participants, and mastering their own performance and understanding of the activity. It is intensely thought provoking; confirming or challenging your own ideas, whilst also introducing new ones.

The key to the book's success lies in its well laid out structure and clear writing, keeping technical jargon to a minimum, all accompanied by excellent illustrations. There are 350 pages of concise content, no waffle, and all presented in a highly accessible and intelligible way. Crucially, there is an impressive array of contributors from all disciplines who illuminate the text with honest accounts of coaching in action – the good, the bad and the ugly. There's a slight bias to paddle sport experiences here, but this is picking. It's really refreshing to read of the successes and failures of these coaches as they developed their own skills in the real world. These bring the book alive and encourage the reader to both experiment and reflect on their own practice – an essential to coaching development. To help in this process there are also tasks and questions for the reader to consider. Useful references for further reading are also provided at the end of each chapter which have been well chosen to be relevant and readable.

I wish I'd had this book thirty years ago when I was grappling with my own understanding of teaching and coaching. However, this is not a beginner's guide. It will be best used as a dog-eared reference book for practicing coaches and instructors, to go back to time and again. A few examples of favourite sections of mine are: the introduction defining what an effective coach is and how they behave; the description of coaching styles and how these need to continually adapt to suit the participants; and the importance of understanding the motivation of participants and the process of goal setting. I also like the very last page that acknowledges the reader has full autonomy over what they choose to accept or reject in the book – a nice touch.

I tried to pick holes but could find none of any significance. I can only find praise from coaches much more experienced than me. This is an important book that will influence the sector for years to come and should be required reading for all adventure sports coaches. It will make us better at what we do. ■

BOOK REVIEW



THE GREAT SEA CLIFFS OF SCOTLAND

Compiled by Guy Robertson

Reviewed by Tom Ripley

The Great Sea Cliffs of Scotland is a sumptuous tome. It showcases the very best of Scottish sea cliff climbing, from the very mainstream Old Man of Hoy, to the practically unheard of Clo Mor on Cape Wraith.

I've found the book to be very inspiring. It features a mixture of high-quality images, combined with personal accounts of climbing endeavours on the individual cliffs. These are similar in style to the essays found in *Hard Rock* or *Cold Climbs*. The contributors list reads like a who's who of Scottish climbing. I particularly enjoyed reading Lou Reynold's story of climbing the Old Man of Hoy, as it resonated with my own experience of that stack.

The Scottish Mountaineering Press have spared no expense with this publication. The paper used oozes quality and allows the images to shine. The authors have selected a mixture of landscape and action photographs, and it is clear that some real effort has been taken to capture some cliffs that have never previously been photographed. In many ways the images in this book are the star of the show, and the plethora of double page spreads, and full-page shots really

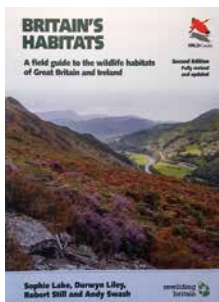
capture the essence of Scottish sea cliff climbing. For me the standout photographers are Hamish Frost for modern action shots, and Colin Therfall for his superb landscapes.

While nearly every sea cliff in Scotland is included in this book, there are some glaring omissions. I was particularly disappointed that Neist Point and Suidhe Biorach on Skye were omitted, though bizarrely there is a superb landscape shot of Neist. However, this may be an unfair criticism – I just have fond memories of climbing on those crags on 'active rest' when working on Skye.

The book neatly divides Scotland's sea cliffs into the following sections: the Northern Isles, the Aberdeenshire Coast, Caithness, The Hebrides, and the North West Coast. Each section has its own introduction, that sets the scene for the crags that follow, and includes a poem from Stuart B. Campbell.

Another slight criticism is the lack of practical information on the crags featured. Whilst the Great Sea Cliffs of Scotland is no guidebook (you'd need a haul bag to carry it up the routes!) it would have been nice to include some practical information at the start of each chapter, especially for those less familiar with the crags. Information such as: when to go, how to get there, a sketch map of location, which guidebook the crag is in, would all be helpful.

In conclusion *The Great Sea Cliffs of Scotland* is a super inspiring book and will open your eyes to whole world of Scottish sea cliff climbing. If you are into adventurous sea cliff climbing, you really must have a copy of this on your bookshelf, alongside *The White Cliff...* ■



BRITAIN'S HABITATS - A FIELD GUIDE TO THE WILDLIFE HABITATS OF GREAT BRITAIN AND IRELAND 2ND EDITION

by S. Lake et al

Reviewed by David Broom

As outdoor professionals we typically have a keen interest in identifying natural heritage features within the areas that we enjoy and

work in. Naming the flora, fauna, rock types and landforms we encounter is an important part of the rich countryside experience that we share with our clients. In this area of our work we benefit from an extensive range of identification guides that help us to interpret and explain the natural environment features that we see. We can demonstrate an even fuller understanding of the ecological significance of the plants, animals and other features we notice by explaining how they come together and interact as wildlife habitats.

With the recent publication of the second edition of *Britain's Habitats* we now have an indispensable identification guide to the wildlife habitats that make up our countryside. This is a great book and contains lots of information of relevance to outdoor professionals' interests. The book presents a broad-brush list of

habitat types, with sub-divisions of each type providing increasingly detailed explanations of ecological interactions between geology, landform, flora, fauna and human activities. The sub-divisions typically reflect locally distinctive wildlife habitat character and nature conservation importance. Every habitat entry within the book is supported by text describing how to recognise each type, comments on their distribution and nature conservation value, and suggestions for the best time to visit. Locations are given for examples of the more distinctive habitat types.

This edition of the book provides updated distribution maps for our wildlife habitats, helping to illustrate the localised distribution of some of our more specialised wildlife habitats such as scree, upland wet heath and montane heath. It is a very visual book, with really good use of over 900 photographs to illustrate and explain the ecological significance of features that make up each habitat type. This helps the reader to become familiar with the general appearance of our wildlife habitats; photographs and descriptions of specific features provide the reader with more detailed information to describe the specific ecological distinctiveness and importance for nature conservation of Britain's Habitats.

The book provides clear and concise information and explanations that outdoor professionals will find indispensable when guiding their clients through the natural environment of Britain's upland and lowland landscapes. ■

New climbing books



Peak District Gritstone is a fully comprehensive guide to traditional gritstone climbing which covers the whole of the national park. Written by local climber Graham Hoey, it features over 2,000 carefully selected trad routes graded from Mod to E10. Each crag features detailed access and approach information, including GPS coordinates for parking and crag grid references, alongside superb action photography and over 400 colour photo topos.

GRAHAM HOEY

PEAK DISTRICT GRITSTONE

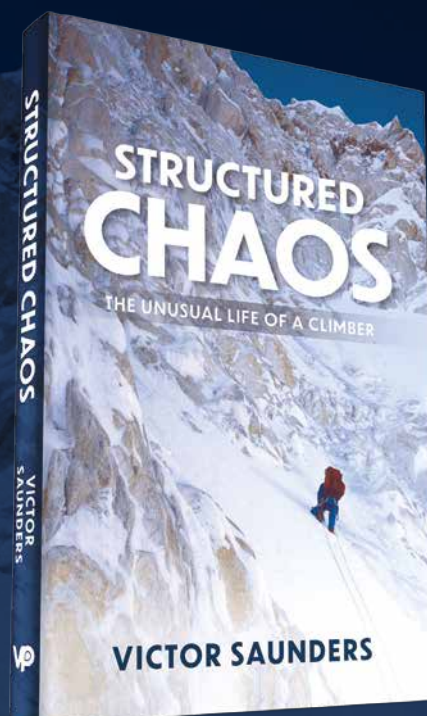
OVER 2,000 CLASSIC TRAD ROUTES
ON EASTERN, WESTERN AND
MOORLAND GRIT

STRUCTURED CHAOS

THE UNUSUAL LIFE OF A CLIMBER

Structured Chaos is Victor Saunders' follow-up to *Elusive Summits* (winner of the Boardman Tasker Prize in 1990), *No Place to Fall* and *Himalaya: The Tribulations of Vic & Mick*. He reflects on his early childhood in Malaya and his first experiences of climbing as a student, and describes his progression from scaling canal-side walls in Camden to expeditions in the Himalaya and Karakoram.

VICTOR SAUNDERS



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