

The Professional **Mountaineer**

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of Mountaineering
Instructors

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NEXT ISSUE

Summer 2019 GPS – basic navigation, developing skill part 2 and the red kite. Copy deadline: Friday 19 April 2019.

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Our front cover

it's all about the view! Ski touring above Mefjord on Senja Island, Arctic Norway. © Al Powell.

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EDITORIAL

As I write this editorial, through my window I glance a sea of snowdrops, aconites and daffodils.

Our maritime climate has taken the usual early winter freeze-thaw cycle to new levels this year, certainly in Snowdonia where the snowline has been almost as variable as the tide. It could be argued that this weather has helped to minimise the disruption caused by maintenance work on the Ben Nevis track and the closure of the Cairngorm funicular, but it has undoubtedly been a tough start to the winter season for UK mountain professionals.

The difficulty of regularly committing to long approaches to seek a fine balance between safety and challenge was brought to a tragic head by the death of Andy Nisbet, a qualified mountaineering instructor with by far the most extensive CV of any winter climber in the history of the activity – he was certainly the king of modern mixed climbing, though was far too modest to ever claim that accolade. Andy's partner on that fateful day was Steve Perry, another prolific activist – as can be seen from his logbook on UKC.

A few days later, it was announced that *Free Solo* had won a BAFTA for best documentary film. It's a great movie, and has sparked an unprecedented interest in climbing – but it highlights for me the same fine balance of judgement, albeit framed more dramatically: do the rewards match the risks? Adventure is the thin line between the known and the unknown; incrementally pushing beyond our comfort zone into our inner resources. Honnold's



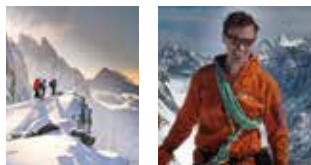
PHOTO The editor at the Welsh Climbing Championships 2019. © Zoe Spriggins, BMC.

preparation minimised the potential for surprises on the day, but nothing is certain. I would argue that Andy Nisbet's legendary new routes list shared similar levels of meticulous planning and recognition of the potential consequences, though less binary unless considered cumulatively. The greatest danger comes not from tackling the crux, pumped with adrenaline, but instead it is the easy ground, the transition, the descent (or homeward drive) to normality, when "a momentary negligence may destroy the happiness of a lifetime".

I believe that it's our holiday adventures that our clients recruit us for; we push our boundaries beyond our comfort level – not just with risk but also wider fields of knowledge, so that they don't have to.

Steve Long
Technical editor

OUR COVER



Al Powell

Al is a British Mountain Guide and a director and head ski guide at Alpine Guides Ltd. Being a ski touring specialist, the vast majority of his ski days are human powered, touring throughout the winter with clients and family, who are also keen ski tourers.
www.alpine-guides.com

OUR SPRING ISSUE CONTRIBUTORS INCLUDE



Susie Amann

Susie is an International Mountain Leader with a love of mountaineering on skis in cold and high places.



Jonty Mills

Jonty is a Mountaineering Instructor Award holder, as well as International and Winter Mountain Leader. He is also a medical doctor with an interest in Mountain Medicine. He lives in the Scottish Highlands.



Alex Rhodes

Alex is an outdoor instructor and naturalist based in the South West who runs Summit Sense. He has a BSc in Zoology and holds the Mountain Leader and Rock Climbing Instructor qualifications.



Ali Rowsell

Ali is a Physical Education teacher and freelance IML based in Sussex, who previously worked and lived in the foothills of the Jura Mountains. Ali wrote *Switzerland's Jura Crest Trail*.
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Feeling inspired?
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Fancy advertising?
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NEWS



THE ASSOCIATION OF MOUNTAINEERING INSTRUCTORS (AMI)

I'm privileged to take up the role as the Chair of the Association having been a member since 1995. I'd like to thank Guy Buckingham for making the handover as seamless as possible, and the members of the committee/partner organisations who have made me welcome. The planned work to support and represent the membership in the coming year has been collated into the Delivery Plan 2019-20 which is available on the website for you to view. Some of the many items include strengthening the governance arrangements following professional advice, looking at welfare options for members in need, and investigating a new marketing strategy based on research to promote our work.

At the AGM the results of the naming proposals vote for the MIA/MIC were announced and the majority were in favour of change to Mountaineering and Climbing Instructor (MIA) and Winter Mountaineering and Climbing Instructor (MIC). MTUK will now consider the proposals and there will be AMI representatives working within this process.

The association couldn't function without a huge amount of voluntary time from the committee, reps, and working group members – we are indebted to them. Here's to a successful end to winter and a great summer on the rock!

Phil Baker (Chairman)



© Hannes Bonitz

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

T 01690 720123
www.ami.org.uk



BRITISH MOUNTAIN GUIDES (BMG)

As the winter settles down to more normal temperatures and levels of snow compared with early January, BMG training courses have been run successfully for candidates and aspirant guides in Scotland and the Alps, combining winter climbing, skiing and avalanche education. Hopefully this will culminate in eight new fully qualified guides this summer.

The next challenge for the association is the potential difficulties that could arrive as a result of withdrawal from the EU at the end of March. The registration of professional qualifications (EPC) is going well and should not be an issue, as to national identity and access this is still an unknown.

The Arc'teryx Big Weekend which starts the Arc'teryx Lakeland Revival is on the 4th-5th May in Langdale and is a series of workshops/instruction on a variety of climbing and mountaineering skills staffed by BMG members. <https://www.arcteryxlakelandrevival.com/>

The next IFMGA meeting is 21st-23rd May in the Tannheim. Topics of discussion will be training of guides, trainer exchange and environmental issues through the ESAC Environment and Sustainable Access Commission. BMG members are active in all of the above.

Mark Charlton (President)



© Mark Charlton

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)

First, we'd like to thank all the people who attended the BAIML Conference in Buxton a few weeks ago. It was a great success and the format worked really well. We are pleased to welcome new membership director Michelle Lawrence-Smith and Corinna Parry from the BAIML Office received honorary membership of the association for her excellent service.

The new CPD renewal system is online and members can now print off a certificate at any time to show their current CPD points. Moving forward to 2020 and beyond a new system is available online. Progress has been made to place the IML Award on the Scottish Qualifications Framework as reported by Kelvyn James.

I visited the Adventure Travel Show in February and was able to represent BAIML at one of the Cicerone trekking workshops and discuss promotion initiatives. It was very heartening to see many IMLs there and stands with the UIMLA logo visible, thus demonstrating the importance of having a professional standard for international mountain leaders seen by travel companies and show attendees.

Austria and the Republic of North Macedonia became new full members of UIMLA in Poprad, Slovakia with Slovenia, Sweden and Hungary being welcomed as aspirants.

Anne Arran (President)



THE MOUNTAIN TRAINING ASSOCIATION (MTA)

Our winter CPD event that took place on the 26th and 27th January at Glenmore Lodge was a great success, the weekend was packed with workshops covering a variety of winter skills including avalanche awareness, navigation, intro to winter climbing and teaching winter skills. We've already confirmed next year's dates for the 25th and 26th January 2020.

We have launched a series of specialist Mountain Weather Workshops in collaboration with the Met Office, these workshops will take place in a variety of locations around the UK throughout 2019. The Met Office believes that working with MTA is a great way to increase awareness of their mountain forecasts amongst the mountain user community.

We'll be circulating a membership survey in May to get your feedback and provide an opportunity for you to help steer future developments. Our experts to the regions campaign will continue this year and our 12 month mentoring scheme pilot will conclude in June. We hope to be offering more members opportunities to get involved as mentors.

Finally, it's great to see regional groups out making the most of the dark evenings with a variety of peer led night navigation sessions and social climbs.

Belinda Buckingham (Development Officer)



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**
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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.

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ABOVE The craggy top of Mount Roti (1395m) in stage 4.

This stunning year-round location is perfect for International Mountain Leaders (IMLs) and Aspirant IMLs working towards the qualification to train, hone and exercise their skills, or simply enjoy some downtime in the Swiss Alps.

Away from the main mountainous areas that attract the tourist crowds, the Jura Mountains are an ideal setting for the IML and Aspirant alike to establish snowshoe trails and summer hikes.

THE JURA MOUNTAINS OF SWITZERLAND

WORDS AND PHOTOS BY ALI ROWSELL

The Jura Crest Trail (JCT), or Jura High Route, traverses an undulating 310km expanse of ancient Nordic terrain. This is where some of the oldest rocks in the Alps lie. The trail links two Swiss towns. It runs in a sweeping arc from the Rhine Valley in the northeast of Switzerland along the border with France to the Rhône Valley in the southwest. En route, the '*Balcon du Alpes*' offers panoramic views over the Bernese Oberland, Mont Blanc and five lakes including Lake Geneva, and the highest mountain lake in Switzerland, Lac du Joux. It's a rolling showcase of natural features and geological phenomena including deep gorges, mountain streams, glistening lakes, tranquil forest, extensive alpine pastures and craggy exposed cliffs.

The JCT is one of seven national walking trails in Switzerland (National Route 5). It begins within 15km of Zurich airport and finishes in Nyon, on the regional train line which links directly to Geneva airport in less than 20 minutes. Public transport in Switzerland is not only extremely efficient but reasonably priced, with Postal Buses and local train stations making access to the Jura Mountains easy for an IML leading a group. More information on access, accommodation and suggested routes can be found in the recommended Cicerone guidebook (Jura Crest Trail, 945).

The main draw of the Jura is the year-round potential to explore. Snow can fall throughout the



1. Traversing the 'Balcon des Alpes' with Mont Blanc in the background, as you approach St-Cergue on Stage 13 of the Jura Crest Trail. 2. View of Hallchopfli [1232m], from the Roggenflue [994m] in stage 3 of the Jura Crest Trail. 3. Cruex du Van. 4. An Alpine Pasqueflower late in the season. 5. View from the fortress-top summit of the Belchenflue in Stage 3 of the Jura Crest Trail.

winter, as late as April and as early as October, providing Aspirants and IMLs with extensive opportunities to practise for their winter assessment, as well as hike and establish snowshoe trails on pristine, isolated areas, away from the crowds. It's an IML's dream. *Ski du Fond* (cross-country skiing) and *Ski Randonnée* (ski touring) can also be experienced at certain locations on the Jura. Throughout the spring, summer and early autumnal months, *Wanderweg's* marked trails offer walking opportunities for all, whether you're on a guided trail with an IML and this is your first time in the Alps, or you're a seasoned trail runner wishing to cover the JCT's 13,000m ascent.

There are plenty of historical and cultural interest points that could fill days, if not entire weeks. For a start, the Jura is famous for having up to 950 flowering plant species alongside extensive forests due to its limestone base. Wild flowers such as spring gentians and crocus carpet the hillsides as early as March. The root of the well-established giant yellow gentian is used in the production of gentian liquor, a speciality of the southern Jura. Another delicacy of the Jura, now found extensively throughout delicatessens in the UK, is *Vacherin Mont d'Or*, a soft cheese baked in the oven and served over boiled potatoes. The cheese is encased in locally-felled Norwegian spruce wood giving it its very distinctive flavour.

Due to its close proximity with the French border, the southern Jura was heavily guarded during the Second World War, and many

defences can still be seen. From 'toblerone' tank traps and bunkers hidden high on vantage points, to underground fortifications that housed 200 Swiss soldiers (*Fort de Pre-Giroud*). Allied Prisoners of War, Jews and smugglers all made use of hidden routes through the *Grand Risoux* forest to cross to the safety of Switzerland. It is still possible to visit mountain huts used by the *Passeurs* (Swiss smugglers), as well as retrace their steps over the border from Chapelle des Bois in France. There are museums located throughout the Jura, such as the *Vacherin Le-Pelerin* in *Les Charbonnières*, which offers group bookings.

For geology-lovers the *Creux du Van* (1463m), *Aiguille de Baulmes* (1559m), *Dent de Vaulion* (1483m) and *La Dôle* (1677m) will be some of the most iconic sights. The *Creux du Van* sits above the town of *Noirigue*, a perfect example of Jura limestone with an impressive 160m high vertical rock wall amphitheatre within a 1km wide valley.

The Jura has much to offer and admire throughout the year. It was an awesome experience to have been there in all seasons throughout my own IML training and assessment, but especially in winter conditions, snowshoeing and breaking trail – perfect back-country terrain in a safe environment. The angle of slope means there's limited avalanche risk. I highly recommend a visit to the Jura and its surrounding areas for anybody wishing to undertake IML summer and winter activities, or simply as an enjoyable trekking holiday.

DESTINATIONS



6. A typical scene on the Jura Crest Trail [punctuation] craggy limestone escarpments, forests and alpine pastures filled with wild flowers and cows. 7. The end of the Jura Crest Trail and the shoreline of Lake Geneva. 8. There are over 950 flowering species found on the Jura, including Yellow Rattle. 9. A Carline Thistle amongst the forest floor. 10. Field Gentian (*Gentianella campestris*). 11. The rather toxic Purple Monkshood, also known as Wolfsbane. 12. View from the summit of the Belchenflue looking east, towards the town of Dielsdorf.

With so few organised expeditions, treks or companies operating in the Swiss Jura, I'm keen to share my experiences of this stunning, barely touched area of beauty. I explored the Jura extensively, and mostly alone. As a female outdoor leader, the Jura was my introduction to being out in the mountains, alone and in all seasons. I have never felt so safe and confident in my own abilities as I did during my time working in Switzerland. I hope I can inspire more women, and men, to head out into the mountains on similar experiences. The opportunities on the Jura Crest Trail are extensive, but not advertised nearly as much as they should be! ■



Ali Rowsell is a Physical Education teacher and freelance IML based in Sussex, who previously worked and lived in the foothills of the Jura Mountains. Ali wrote *Switzerland's Jura Crest Trail* (ISBN: 9781852849450), published by Cicerone. Contact Ali on E alirowsell@gmail.com for further information.

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Moss Campion is one of the colourful plants which grow freely.

MOUNTAIN WALKING IN THE LOFOTEN ISLANDS

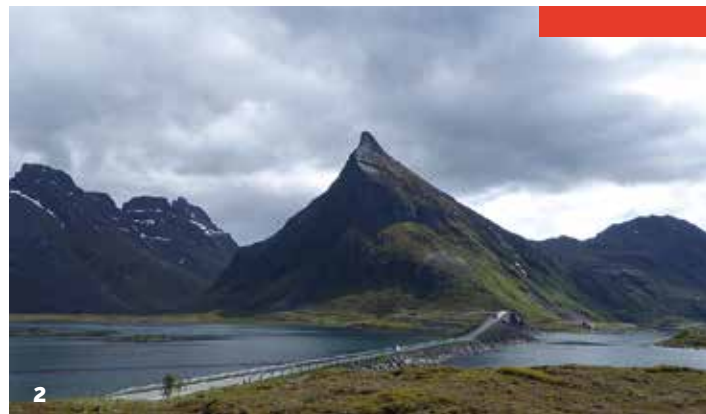
WORDS AND PHOTOS BY ARTHUR JONES

I like exploring islands. There is something intensely satisfying about building up a geographical picture of an area with clearly defined boundaries and beginning to recognise its ridges and valleys.

That I like exploring mountainous islands goes without saying. My boots have tramped over a good many islands through the years, though never any in Norway, nor indeed the Arctic, so a trip to the Lofoten Islands seemed like a good opportunity to tick off two items from my bucket list.

At around 68° North, the Lofoten Islands are about 180 miles inside the Arctic Circle. They form the end of the 'elephant trunk' shaped peninsula jutting out from Norway's west coast. There are four main islands, from north to south, Austvågøya, Vestvågøya, Flakstadøya and Moskenesøya, separated from each other, and from

the mainland, by narrow sea channels but interconnected by bridges or tunnels. With an area of 474 square miles they are about half the size of Lewis and Harris in Scotland, with a similar sized population of around 24,000 and an economy based on fishing and farming. It is the mountains which grab your attention – although the highest, Higravstinden, is only 1161m and most are below 1000m, they are Spectacular (the capital 'S' is deliberate) with sharp serrated ridges, steep rock walls, fjords and deep U-shaped valleys. Imagine a whole archipelago looking a bit like St Kilda. For many years I have been confidently telling clients that on a fine day nowhere beats the west



MAIN PHOTO Moss Campion is one of the colourful plants which grow freely.

1. Shrubby trees growing along the summit ridge of Dalstinden. 2. The dramatic fin of Vollandstinden. 3. The tree cover Bidalen Valley. 4. Looking north from the summit of Vollandstinden. 5. Looking over to the island of Flakkstadøya from the summit of Breitinden.

coast of Scotland but I've since had to revise that opinion – Lofoten is like the west coast of Scotland on steroids.

One of the many nice things about the Lofoten Islands is that they cater for all tastes and abilities. If rock climbing is your thing, then the village of Henningsvær on Austvågøya is the place to go for its well-developed climbing scene. If you are into long technical mountain traverses, then either Austvågøya or Moskenesøya will keep you happily occupied with bigger, remoter, jaggier peaks for long (or longer) days out. But if you are the type of walker who prefers to admire spectacular views and explore out-of-the-way places while keeping your hands firmly in your pockets, then the two middle islands of Vestvågøya and Flakstadøya have the most to offer. Peaks like Vollandstinden with its dramatic shark fin profile (*Photo 2*) may look intimidating but there is a perfectly easy route up the back of it – we met the local primary children on an 'out of school' day there – one of the few days we met anyone at all. The looks of sheer enthusiasm and excitement on their faces more than compensated for the temporary loss of solitude.

While not all the peaks have quite such a memorable shape, they are all, by most standards, fine looking hills and many are well within the capabilities of a competent hill walker. I say 'competent' because the infrastructure on Lofoten is still refreshingly minimal; hill tracks

are just a fine line through the vegetation rather than the well-trodden routes which have been forged over some of our own hills. There is no alpine style waymarking and encountering other walkers is the exception rather than the rule – all a bit like Scotland fifty years ago (for those who can remember that far back!). And just like Scotland, the weather can be changeable with all four seasons experienced in one day – remember you are in the Arctic. It is a great destination for those wanting to develop some degree of self-reliance.

Another striking factor is the richness of the vegetation. Although there is some sheep farming on the islands, it has always been kept at a low sustainable level – think crofting rather than commercial farming. Hence although the hillsides have been grazed, they have not been grazed out and flowers like Dwarf Cornel and Moss Campion (*Main photo*), to name a couple, grow in the sort of profusion we can only dream about in Britain. It's not just flowers that thrive, trees, albeit small stunted ones are still in evidence high up on the slopes. Look at the picture of the summit ridge of Dalstinden (*Photo 1*) and you can see trees on the gently sloping ridge leading to the summit. Or the Bidalen Valley (*Photo 3*) where there are trees growing right up the corrie. It is a salutary lesson on how our own hills should look and how degraded they have become.



6



7

6. The Northwest coast of Flakkstadøya. 7. Midnight light on Brattflogan.



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

Yet another feature is the clarity of light (in fine weather), and in the summer months, the length of the day – if you visit between the end of May and the middle of July you can safely leave your head torch behind as there are 24 hours of daylight available. The picture of Brattflogan (*Photo 7*) was taken on the way back from a walk at around midnight. Another advantage of this is that you can go for a walk whenever you please – if it is raining when you wake up, just turn over and go back to sleep till the day improves, even if that isn't until 10pm!

Finally, some practical stuff. Lofoten is easy to access from the UK – probably the easiest way to get there is to get to the mainland town of Bodø, either by road, rail or air. From here there are both ferries and flights to the islands. If you are

on a tight budget, wild camping is not a problem or if you want a wee bit more luxury there are plenty of self-catering establishments, including the ubiquitous brightly-coloured 'rorbuer' which were originally fishermen's bothies. There may be snow on the hills till the end of May, so if you want to avoid this, June is a good time before the Norwegian school holidays in July and August when things apparently become busier. For general information, particularly geared towards walking and hiking, have a look at the excellent website www.rando-lofoten.net/en/. Created by French couple David Souyris and Magdalena Brede, who have also published a hiking guide to the islands, it contains a wealth of useful information, including lots of detailed route suggestions. ■

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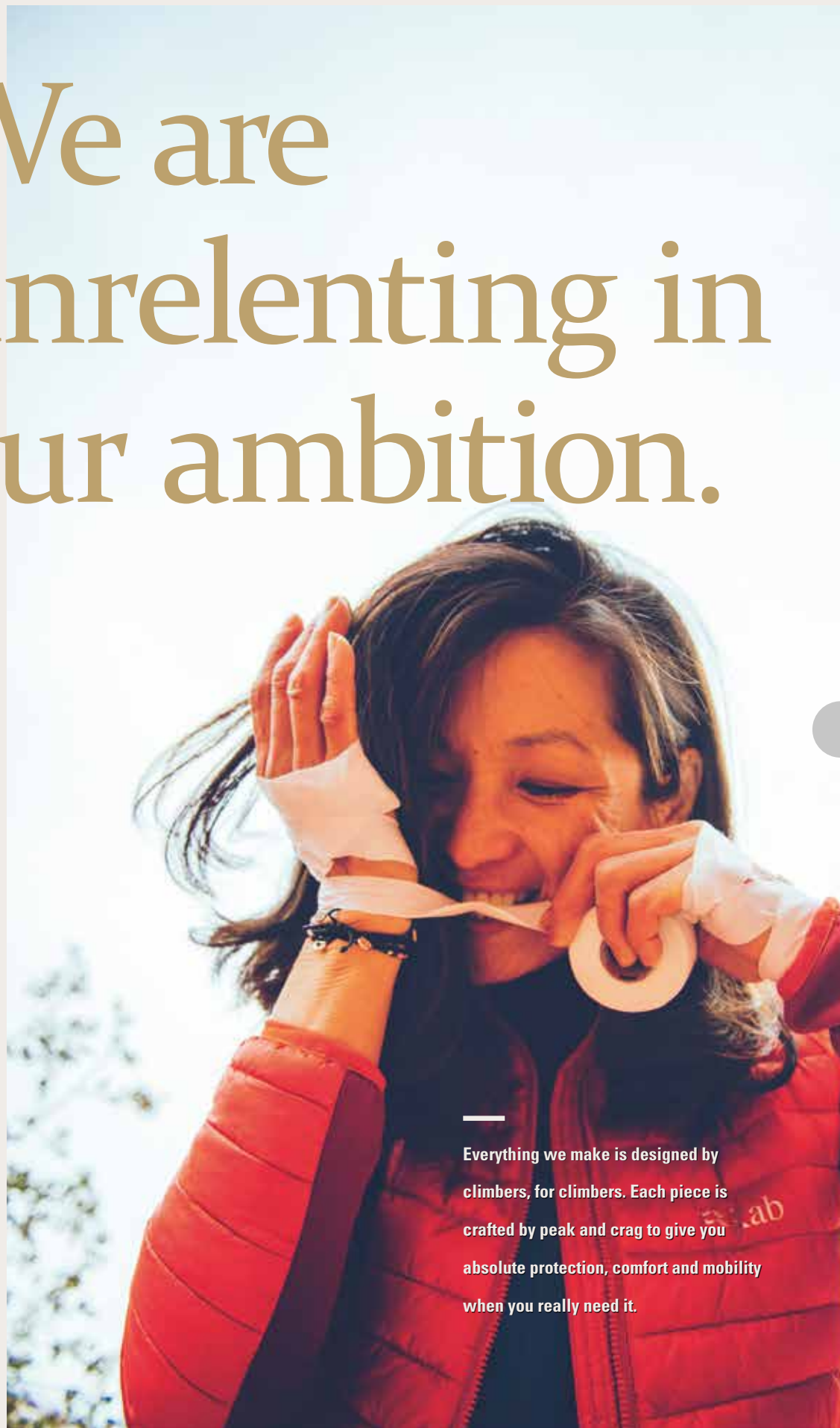
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Using a GPS device to relocate in emergency situations

Essential GPS Skills for Outdoor Professionals

WORDS AND PHOTOS BY RICK SHEARER

Most outdoor professionals are very competent and experienced conventional navigators who often don't see the need to use or even carry a GPS device. However, GPS technology is becoming both ubiquitous and increasingly capable.

It is found in almost every smartphone, and many other “wearables” (also known as watches), as well as traditional dedicated handheld units. No longer are they simple relocation aids (although they remain superb at doing that) but combined with a compass, an altimeter and better-than-paper digital topographic maps, they are comprehensive and unerringly capable navigation systems. For International Mountain Leaders (IMLs), the use of GPS is a navigation skill mandated by the international standard. However, it is also becoming self-evident best practice for all outdoor professionals, where appropriate, to carry and use a suitable GPS for use in emergencies. Nevertheless, if a GPS is carried by someone who cannot operate it effectively, reliance on it can potentially be dangerous. Without question, a GPS is never in any circumstances a substitute for sound navigation skills. Using one successfully requires some key knowledge and skills. The aim of this article is to outline the essential skills required to relocate using a GPS in emergency situations. A second article will develop these skills for using a GPS for basic navigation in everyday situations.

To function, your GPS device must have suitable batteries that work

A GPS device needs appropriate, fresh or fully recharged batteries correctly inserted into the device. Generally, if your GPS takes AA batteries, use either low self-discharge rechargeable batteries (also called pre-charged or stay-charged) or lithium disposable batteries. Don't use alkaline batteries because they can fail unexpectedly when cold. If your device has built-in batteries, keep them on charge right up to the point of use to maximise longevity. Too many GPS users skimp on batteries and so fall at the first hurdle.

You need to know how to operate your GPS device

Before you use your GPS device or app when outdoors navigating you need to be able to operate it and interpret the information it gives, which it displays on various screens and pages. Every device is unique, but all are controlled by pressing buttons or tapping icons on touchscreens and selecting options from menus. All have a map screen (or page) to provide location information, and most dedicated GPS devices have several others including a compass screen,

an elevation screen, a satellite screen and trip data. It is vital to be fluent in operating the device you own. To some, this comes naturally and is intuitive; to others it's a struggle and needs lots of practice to master. It's not the time to learn how to use the device while you're trying to deal with an emergency!

You need to set your GPS device up correctly

Fresh out-of-the-box, or newly downloaded from the app store, all GPS devices and apps need setting up. This varies considerably between makes and models, but there is always a set-up, settings or similar option which is usually accessed from the main menu of the device/app. Sometimes, default (standard) settings are adequate, but often they're not. The only essential settings are the position format (or grid) and datum. These must correspond to the local system, and the paper map that you are using. If your map is GPS compatible, it will state which position format (grid) and datum to use – get a map out and have a look! In Britain, all outdoor maps use British Grid and the OSGB 36 datum (although the terminology used by GPS devices often varies), but elsewhere there are many others. If you get these wrong, any coordinates given by the GPS can be hundreds of metres out. Apps tend to have far fewer position format options compared to dedicated GPS devices, so may not be suitable for use in an area that you are visiting – check before you arrive.

Finally, the GPS needs to have a clear SKY view and be HOT!

The position format settings alone do not ensure that the GPS is accurate and reliable. The device must be able to receive signals from at least 4 satellites and know where the satellites are. When you first switch the device on (or start an app), keep it static, outside, preferably in an open, clear space, so that it can have a clear view of the sky. This gives it the best chance to receive and interpret the faint satellite signals. If possible, select the satellite screen or page to see what's going on (not usually available on wearables and apps). Once it has locked-on to one or more satellites, the GPS device receives data about the location of all the satellites in the constellation. This takes about 12½ minutes to transmit in full, so it can be some time before the device has enough data to be fully accurate. Beware of smart-devices; they use a technology called assisted GPS (A-GPS).



1. Using a GPS on Carrauntoohil, Ireland.

This improves time-to-fix by downloading satellite data from the internet but, when offline, it estimates position from phone masts and can be literally miles out until properly fixed on to the GPS satellites.

Think of a GPS device as being cold when first switched on and, as it receives more and more data from the satellites, it gets warmer and finally becomes HOT. The device will remain HOT and accurate if it maintains a clear SKY view. When the device is switched off, it retains the current satellite data, but its validity ages within several hours, so the device cools down. Once switched on again, it will take a little time to update the satellite data and warm up, but less time compared to when it was cold. It's like a kettle: it takes ages to boil but much longer to cool down. When left for several weeks or more, most GPS devices become ice cold once again – it's as if they had never been used. In general, when any GPS device is first switched on, leave it static with a clear SKY view for at least 12 minutes to become HOT then keep it switched on at all times, and stowed so that it always has a clear SKY view even if you do not immediately intend to use it. If possible, keep the GPS at shoulder height (this is easy to do if wearing a rucksack), with its aerial pointing towards the sky. Wearables have special aerials that work fine on the wrist, but smartphones are a problem: they often have a tiny aerial buried in the device that is difficult to keep pointing at the sky. Don't stow your GPS at waist level (it can't hope to see the satellites!). It is a naïve myth to think you can carry a GPS in the bottom of a rucksack for weeks on end, whip it out at a moment's notice to get an accurate fix and save the day; it's more likely to be the beginning of a disaster.

Location – the most essential GPS skill, particularly in an emergency

If you need to relate your position to a paper map or the emergency services, you will need your location as a grid reference. On GPS handhelds, your location in coordinates is always displayed on the satellite screen as well as GPS accuracy (which is important to give you confidence). Some also conveniently display the location elsewhere. Most devices give the grid reference to 1m resolution by default: there may be more digits than you expect! Make sure that you know how to find, interpret and validate the coordinates that your device displays.

Best practical advice for emergency relocation

Shortly before the start of every outdoor journey, switch your GPS on, keep it static with a clear SKY view until it is HOT. Check that the coordinates it gives are the same as those you have from the paper map that you are carrying. Best practice is to leave the GPS on as described above. Most professionals, however, will choose to turn their device off at this point; store it close to hand – not in the bottom of your rucksack – but it doesn't need a sky view. Periodically, at least every four hours, at an appropriate juncture and location, preferably with a good sky view, switch the GPS back on to get it HOT once more. With modern devices this will take only a minute or two and it will update the satellite data. Check that the location information is still reliable before switching the GPS off once again and stowing it. In an emergency, switch the device back on with the best possible SKY view (move a short distance, if necessary, to improve the sky view), and it will relocate quickly and sufficiently accurately. ■

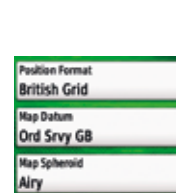


FIGURE 1



FIGURE 2



3

2. Location – the most essential GPS skill. FIGURE 1. Essential Position Format Setup. FIGURE 2. Allow 12 minutes for a GPS to lock-on accurately. 3. Suitable batteries inserted into a GPS device.



Rick Shearer is an International Mountain Leader who has been delivering GPS training to outdoor leaders for over 10 years focusing on that for MTA, AMI and BAIML members.

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GETTING READY FOR YOUR MIA ASSESSMENT

WORDS BY JONTY MILLS

Get out climbing a lot. Yir VS 4c, Ardnamurchan larger. © Alex Cowan.

The Mountaineering Instructor Award (MIA) is a qualification which many people aspire to. In this article I am going to share my recent experience preparing for assessment which I undertook (and passed!) in 2018.

1 Go climbing a lot!

Documenting my experience for registration, I realised I had almost 20 years of recreational climbing experience under my belt. While I was no technical superstar, I had spent a lot of time in the mountains and this experience was invaluable. Training courses alone aren't enough to teach sound mountaineering judgement; you only start to develop that through having your own adventures, and learning from a few (hopefully minor!) mistakes along the way. Remember, the MIA is a "mountaineering" award, not just a "climbing" award, so Alpine experience, while not mandatory, would stand you in good stead. However adept or experienced you may be, make sure you go into the scheme with an open mind, and a big dose of humility!

2 Prepare for your training course

Yes, that's right, your training course! I didn't and wished I had. It's a continuous 9-day block which you need to be prepared for, physically and mentally. Personally, I would have really benefitted from brushing up on some basic self-rescue skills beforehand, that way I would have been able to focus on learning how to apply them, rather than struggling to remember how to tie a Klemheist while dangling in space! James K's article in the summer 2017 edition of the Professional Mountaineer contains some excellent advice to help you prepare.¹ Sadly, it came out just a bit too late for me!

3 Get some support

Returning home from my Training course I have to admit to feeling completely overwhelmed. Excitement at starting my MIA journey had turned to dread at the scale of the task ahead of me. Where to start? Join the Association of Mountaineering Instructors (AMI) as a Trainee member. You'll be offered complimentary membership for the year once you've passed your training. Membership gives you access to lots of different opportunities for support and development, such as workshops, a mentor programme and network of MIAs. I found workshops in both the Lake District and Scotland really useful. I'd definitely advise making some contacts locally with other Trainees; getting out to practise with others in the same boat as you is really helpful, both on a practical level, and also in terms of moral support. I found there were Facebook groups for MIA Trainees based in the Lakes and North Wales, but not for those of us north of the border in Scotland – so I created one!

4 Be organised

Don't underestimate how much time and energy the Consolidation phase (that's the time between training and assessment) requires. Everyone's different. Be realistic about what time you have. Booking your assessment too early isn't a good idea. Think of when you would "like" to do the assessment, then working backwards count up the number of days you have to get out and practice. If you have enough days (and some to spare), then get on and book your assessment. Once it's booked, you can totally focus on getting ready for that date. If you realistically don't have enough days, choose a later assessment giving you enough time to prepare. Everyone's circumstances are different. Allow plenty of time to fill in your digital logbook (DLOG) with personal climbing days, as well as the required leadership and teaching climbing days. Fitting this around work, family and life can be a struggle. Consider the MIA as being like a university degree that you have to study for part time. It will consume your free time. You'll certainly need the support of any "significant others". With a busy job as a doctor, a working wife and young family, there was no way that I could achieve the MIA in a reasonable timeframe without some temporary alterations. I took several months of unpaid leave from work to focus on the qualification. Regardless, with all the time away from home (meeting "partners" etc.), it was definitely a strain for all involved, not least my little old car! While Mountain Training recommend a minimum of 12 months for the consolidation, I did mine in 4 ½ months, but that was almost full time.

5 Aim high

Or "Train Hard, Fight Easy". Assessment nerves mean you may not perform as well as you might do in ordinary circumstances, so you need a little in reserve. Do not fall into the trap of thinking "it doesn't matter if I defer on a day". The assessment is holistic, and many skills can't be divided into neat sections (eg you may need to short-rope or navigate on the approach/descent from your "Guided Climb"). Remember that the stated requirements for the consolidation phase are the absolute minimum; if you don't have more days and experience than needed you're unlikely to impress. I did, but still felt more would have been useful. The stated consolidation requirements are:

- "A minimum of 20 multi-pitch climbs at VS 4c or above, a large proportion of which should be on mountain crags and major sea cliffs".

I had 26, of which perhaps 75% I felt were on major crags (subjective to a degree of course, however if you're unsure then your Assessor definitely won't be!)

- "A minimum of 20 quality mountain days in sole charge of a group". I had 35; a mixture of hillwalking days, and taking people scrambling.
- "A minimum of 20 rock climbing teaching days with students". I had 23, with a good mixture of single and multi-pitch venues, with "partners" ranging from complete beginners through to VS leaders, mostly arranged online. I think that's better than just going out with friends, as it can be more representative of the spectrum of people you're likely to encounter at assessment, and in real life doing the job!

In addition I had another ten days or so observing and assisting qualified AMI members in their work. While this isn't a prerequisite, I found it really useful. There were also countless evenings and little sessions practising self-rescue, rope-work etc.

6 Give yourself the best chance

The only way to habituate yourself to being watched and scrutinised is to practise it. If you've done lots of other qualifications you will be used to it; this definitely helped me. Equally, although the Rock Climbing Instructor award is not a prerequisite for the MIA, the experience of being assessed at outdoor climbing must be beneficial. The preparatory trainee workshops run by AMI are also a great, supportive environment in which to practice having to do things while being watched. In terms of general preparation for assessments, I would also point you to some excellent recent articles.²⁻³

Reading this back to myself, it is interesting how closely my experience reflects the summary of findings in Mountain Training's research into MIA assessment preparation.⁴ Mountain Training concluded that there were several key themes that differentiated those candidates who passed first time and those who did not:

- The time they had to commit to preparation
- How thorough their preparation was
- How confident they were
- Deliberate practice of scrambling and navigation
- Input from qualified instructors with current knowledge of the MIA
- Social support beyond the technicalities of the MIA process

Whether you're just starting out, or you're already on the journey to the MIA, I hope this article is of use to you. It's an undoubtedly challenging, but immensely rewarding path. With the appropriate effort, the qualification is very attainable, and opens up lots of new and exciting opportunities and career possibilities. It is also a good excuse to get out as much as possible in our wonderful hills! ■

Footnotes

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Avalanche Transceiver Interference Advice

WORDS AND PHOTO BY AL POWELL

In the modern 24/7 world, most peoples' lives revolve heavily around consumer electronics – in particular the mobile phone. This presents a problem when backcountry skiing, as electronic devices create electrical interference which can compromise the function of avalanche transceivers.



Ski Touring in Arctic Norway.

This is a well-known problem, but not all backcountry skiers follow the latest advice – either through lack of education, or an unwillingness to change their personal behaviour – so as outdoor leaders, it's important for us to understand the problem and adopt and promote safe practices.

Key Recommendations

- Keep mobile phones and other electronic devices switched OFF* whenever possible while backcountry skiing. This should be standard protocol in any avalanche incident.**
- **Check before skiing!** – Keep all magnets, metal objects, electrical items, foil food and drink wrappers at least 20cm away from your transceiver

while skiing – examples include: phones, action cams, belt buckles, pocket knives, carabiners, ice screws, even underwired bras! Anything with a touch screen or a magnet is the biggest concern, as these create the most interference.

- **Check before searching!** – All switched-on electrical devices must be at least 50cm away from your transceiver during a search – in practice, this means placing them in your rucksack. You are advised to put all electronics in your rucksack and check that your phone is switched off before starting a transceiver search.
- It's best to avoid wearing smart watches/GPS/fitness trackers etc. on your wrist – place them in the top of your rucksack, or in a pocket well away from your transceiver.***

- Always switch cameras off between shots – ie don't leave them on standby. This includes phone cameras.
- Don't use phone apps to control remote cameras via Wifi or Bluetooth.
- Avoid wearing chest-mounted action cameras and heart rate monitors, as these sit too close to your transceiver.
- If you have a pacemaker, wear your transceiver in a secured trouser pocket rather than in a chest harness.
- Don't buy ski jackets with magnetic buttons and never use battery heated gloves.

Remember: Switch Off!

Clearly, there are plenty of situations where it may be a good idea, or necessary to use electronic items while backcountry skiing – such as a GPS in poor visibility etc. However, much of the time it's done out of habit, or choice. When you want to take a photo or shoot some video, then do so in a safe spot and switch your device off fully between shots. Likewise, if you want to check for messages/updates during the day, then do so in a safe place, eg at lunchtime, and remember to switch your phone off again before resuming skiing.

The message is, plan to reduce your use of electronic devices while backcountry skiing, only turn them on when needed, always carry them well away from your transceiver and by default, it's safest to keep them switched off.

Cameras – if you want good photos, it's still best to buy yourself a decent camera, rather than relying on your phone!

Lift Passes – these have been tested and found to be ok.

The Problem

The effect of consumer electronics, radios and metal objects on avalanche transceivers has been the subject of a number of scientific studies. The key findings are that devices with touch screens cause the biggest problems (a problem in itself, as practically everything is now going over to touchscreen!) – and most especially, modern smartphones.

NB Ski lifts, electrical power lines and approaching storms are also known to cause interference, so you need to be aware of your surroundings too.

The Effects

In Send Mode, the output range of your transceiver can be reduced by up to 30% – which makes you harder to find.

In Search Mode, electronic interference is a much bigger issue and can result in reduced search range, false distance/direction readings and problems with processing multiple burials – ie it can totally mess up a search.

Manufacturers' Recommendations

All of the major transceiver manufacturers recommend keeping any switched-on mobile phone and other electronics, magnets and metal objects at least 20cm away from your transceiver when it's in send mode (ie when skiing) and any switched-on electronics and magnets at least 50cm away from your transceiver when it's in search mode (ie in a rescue).

A lot of people read this casually and think: "Ok, I can keep my phone switched on, so long as I keep it in a pocket well away from my transceiver – problem solved, let's go skiing!" However, it's not quite as simple as that – as it's also advised you keep electronic items switched off whenever possible while off-piste skiing. Some of the reasons behind this are explained below:

First, it's not possible to keep your phone in a pocket and over 50cm away from your transceiver while doing a search – it needs to be in your rucksack, so you might as well switch it off. Second, stressed skiers frequently forget to switch things off before starting a search and third, multiple sources of interference add up, so if there are lots of electronics switched on in the group, this creates far more interference in the search site.

Latest Transceiver Developments

Transceiver manufacturers are well aware of the problem and working to mitigate against the effects of interference problems. Some of the newest transceiver models can now detect interference and warn the user – both the new Baryvox and Baryvox S models from Mammut can do this (up to a point – in my own testing, it isn't 100% reliable!)

With older models you don't get any warning if interference is causing a problem – the transceiver fails to detect a signal when it should, or 'detects' a false signal where none exists, or gets confused and takes you in the wrong direction.

Safety Protocols

As mountain professionals, we need to consider how we manage and use electronic devices whenever we are using avalanche transceivers. Personally, I have an 'all phones switched off' rule for off-piste skiing. I brief my group on transceiver interference issues at the start of each week and on the first morning, we switch all phones etc. off and do a full transceiver range and function check before going skiing.

Despite this, about 2-3 times a year I find a problem with a transceiver. Every time so far, I've tracked it down to a mobile phone still switched on in a pocket somewhere, or another electronic device close to the transceiver.

Clearly, most people want to take photos and video of the trip – so I ask folk to switch phones off between shots, just like I do with my camera. I also take a lot of photos and videos myself, with a good dedicated camera – so that everyone comes away with plenty of great photos and memories.

Reminders after lunch/photo sessions complete the daily routine.

I carry a phone and Sat Phone for emergency communication, but they stay in my rucksack switched off until needed (in very cold, weather I'll keep one switched off in a pocket more than 20cm away from my transceiver).

I use GPS minimally and don't rely on electronics as my only navigational tool.

This is a shortened version of a much longer article written to educate (and pre warn!) clients about what to expect on a trip – if you want to read the full article, you can find it online here: <https://www.alpine-guides.com/ski/insider-knowledge-ski/transceiver-interference-advice/>



Al Powell is British Mountain Guide and a director and head ski guide at Alpine Guides Ltd. Being a ski touring specialist, the vast majority of his ski days are human powered, touring throughout the winter with clients and family, who are also keen ski tourers. Away from guiding, you are most likely to find him bouldering, running or riding in the hills. www.alpine-guides.com

* NB OFF means completely switched OFF in this instance – airplane mode won't help here, as it's the touch screen that causes the most interference.

** In an avalanche incident, if rescue services are available close by (ie less than 15 minutes away) and you decide to call for a rescue, then it's ok to keep one 'rescue phone' switched on, so long as you keep this phone well away (100m or more) from the search area – clearly, this decision also removes one rescuer from the search.

*** Very low power electronic devices (eg flat battery watches) are ok to wear on the wrist – if the device needs regular recharging however, don't wear it on your wrist!



1

You're out on the hill taking a route you know well. A small grey object moving in the mid distance catches your eye. From the way it flits about it's definitely a bird.

What's all this twitter?

WORDS BY ALEX RHODES

You've seen it before. What's its name, and how does it survive in this landscape? You stop to take a closer look, but it's off— up higher this time, in a flash of black and white it swoops back in your direction of travel with a “*chi-siik*” call. You spot it again, but your view's obstructed now by a swathe of soft rush.

Sound familiar? Spotting birds, particularly in an upland environment, isn't easy. They don't stand still like plants or lichens. It can be hard to get close enough for a decent view without the need

for binoculars. Simply opening a field guide to find pages upon pages of intricately coloured plates and ornithology jargon can leave you confused, turned off and unable to tell a Wheatear from a Wagtail, a Stonechat from a Skylark. However, if you bear with me I may just convince you otherwise. This isn't a species-by-species guide to identification, rather some concepts I've learnt that help me look for, identify and understand the birds inhabiting our countryside.



Location, location, location.

Flicking through a field guide your heart may sink to learn there are roughly 250 species of common breeding bird in the British Isles (the figure can be doubled if you include the anomalous species blown over to our shores from Europe, North America and Africa). However, there are only around (a far more encouraging) 60 species that you're actually likely to encounter in the upland environment.

Understanding a bit about the natural history and ecology of birds can really help in identification. Some species are seasonal; you won't see Willow Warblers, for example, during the winter months as they migrate south to warmer climates. Other species don't move outside certain habitats; the Ptarmigan, for example, is unlikely to be seen in the moorlands of Staffordshire or ffridd of North Wales due to a tight home-range over the Scottish summits. BirdTrack's interactive map is a good place to start in assessing the likelihood of seeing certain species. Type in a species name and zoom in to see where sightings have been recorded: <https://app.bto.org/birdtrack/main/data-home.jsp>

On a local-scale, think about the prevailing conditions on the mountain. Birds will naturally seek shelter on rough days so check the leeward slopes or behind large boulders when it is blowing a hoolie. Remember that birds prefer to take off into a headwind for increased lift. On a winter's day, are there suntraps where the ground has thawed or snow-cover is thinner/absent? Where is insect activity greatest?

Ears first, not eyes.

Contrary to popular opinion, an experienced birdwatcher uses their ears more than their eyes. You need a *really* good view of the mottled Tree Pipit to tell it apart from the Meadow Pipit, but the moment it opens its beak, you'll know what you're looking at. There's no need to go out onto the hill each day with a pair of binoculars around our neck if you invest some time learning common

bird calls and songs. You will soon be able to pick out birds to your clients.

It is important to understand the difference between types of vocalisation, however. A song carries more 'meaning' than a call. Males use songs to defend territory and attract a mate.

Songs are usually more complex than calls and for a lot of species, are strongly seasonal. Calls, on the other hand, are brief notes.

Songs are usually more complex than calls and for a lot of species, are strongly seasonal. Calls, on the other hand, are brief notes. 'Alarm-type' calls are thin whistles that alert neighbouring birds to danger but make locating the source difficult. 'Contact-type' calls maintain bonds between groups. You need only watch a mother duck and her ducklings on a local pond to appreciate this.

There are many CDs, MP3 downloads and smartphone apps available to purchase in order to familiarise yourself with bird calls and songs. My recommendation for an excellent free (and global) resource to get started is Xeno Canto: www.xeno-canto.org

Behaviour is important

If you spot an interesting bird that warrants closer inspection, hold off the binoculars for a minute and just watch it with the naked eye. What is it doing? How does it move? You can start to eliminate potential candidates by taking note of the general behaviour of a bird. Birdwatchers amusingly call this the 'jizz.' The etymology of this word is thought to have roots in the Second World War air force acronym GISS, meaning 'General Impression Size & Shape' but could also stem from the word 'gist'. A Hen Harrier, for example, is more likely to be floating lightly around on the air compared to a Merlin flying quick and low to the ground compared to a Buzzard stiff-winged soaring in circles on a thermal.

- 1. Cuckoo. © BTO/Edmund Fellowes.
- 2. Snow bunting. © BTO/John Harding.
- 3. Curlew. © BTO/John Harding.



Alex Rhodes is an outdoor instructor and naturalist based in the South West who runs **Summit Sense**. He has a BSc in Zoology and holds the Mountain Leader and Rock Climbing Instructor qualifications. Alex is providing a series of Upland Bird ID workshops in May 2019 across the South West and Peak regions for association members. Details on the Mountain Training Candidate Management System [CMS]. [f me/summitsense.co.uk](https://www.facebook.com/summitsense.co.uk)



4. Ring ouzel. © BTO/John W Proudlock. 5. Hen harrier. © BTO/Derek Belsey.

Flight Distance Threshold

Try to visualise a floating 3D sphere with a bird at its centre. The moment you, or any other perceived threat, crosses that perimeter then the bird is triggered into some kind of escape reflex. In reality, it's more complex than that with different perimeter bands and responses, but it's a good way to understand a bird's flight distance. Every species will react in different ways and have differing thresholds depending on the situation.

I find it quite remarkable how close you really can get to some birds by sticking to well-used byways.

This only applies to areas of regular footfall; the concept here is that birds become habituated to regular patterns of disturbance. If the majority of people use a given landscape in a fairly predictable manner both spatially – sticking to main footpaths and pathways – and temporally – peak activity falling at set times of the day – birds become accustomed to this and their threshold of disturbance can be substantially lower. Naturally any deviation from this pattern, even simply stopping to get your camera out, prompts their escape response to kick in!

On closer inspection

Size is a useful tool for course-level identification but getting a good sense of scale when outside can be tricky. If you're starting out, try grouping birds under generic sizes such as 'golf ball', 'tennis ball', 'can of beans', 'rugby ball' etc. That way you might start to appreciate the differences between a Skylark and a Reed Bunting. Likewise, a basic understanding that males and females can differ in their plumages, sometimes considerably, will help. The same can be said for adults versus juveniles. I wouldn't get hung up on learning specific feather tracts unless you're really keen!

5 upland specialities to find this season

Ring Ouzel

Your 'regular' garden Blackbird on steroids! This beautiful thrush is the Blackbirds' migratory cousin and has the power to shut down whole Gritstone edges when it attempts to breed in the Peak District. Listen out for a mournful song resonating from back corrie walls and look for the unmistakable crescent moon splashed across the males' chest.

Curlew

One of my favourite moorland birds for its evocative call alone. Sadly in serious trouble due to successive poor breeding seasons, this iconic wader likes space, so keep an eye out in open expanses of moorland and damp flushes.

Cuckoo

Proof that learning bird calls isn't that hard! This is one you probably already know from literature. In flight, Cuckoos can be mistaken for a small bird of prey due to their dark coloured upper parts, streamlined body shape and long tail. They're often being pursued by a scolding mob of smaller birds.

Hen Harrier

A very special raptor indeed and a highlight to any day no matter how brief the encounter. Males are a ghostly pale grey contrasting with the dark brown of female/juvenile individuals. You'll notice a striking white band around the base of the tail in both forms, but this really stands out in the latter.

Snow Bunting

You'll need to put in some legwork for this one. Try around the Charles Inglis Clark (C.I.C) hut beneath Ben Nevis or over on the summit plateau around Ben Macdui.

Postscript

For those that hadn't clinched it, the initial bird was a Pied Wagtail. ■

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





A three-part series exploring flower families

Who's in your family tree?

WORDS AND PHOTOS BY JIM LANGLEY

Flowers in the Rose (*Rosaceae*) family vary widely from trees and shrubs to low-lying herbs many of which produce edible fruits such as apples, peaches, cherries, plums, apricots, rose hips and strawberries.

Fossil records show that the first rose species appeared some 35 million years ago. Today, over 2,500 species grow all over the world. Yet what defines these plants as members of the same family?

Leaves and branches

Typically members of the Rose family have leaves arranged alternately along the stem. The leaves are more or less oval in shape and have saw-toothed or serrated edges. Species forming tree and shrubs generally have sharp spines or prickles on their branches whereas smaller herbaceous plants don't have thorns.

Flowers

The flowers are flat discs radiating outwards and generally have five petals. There are mainly five male reproductive parts (stamen) within the flower which surround the central female part which has a fuzzy-looking appearance. Most species are insect pollinated and have a pleasant fragrance which is produced from scent glands on their petals.

Bees are an important pollinator for this family and range from tiny, metallic-green flower bees to honey and bumble bees.

Non-sexual methods of reproduction also occur with some species producing suckers and runners from their rootstock. Others produce runners from their stems that root to produce a plantlet that will eventually live an independent life.

Fruits

There are many different types of fruits in the Rose family. These range from single-seeded, fleshy fruits called drupes and include plums, cherries and apricots to smaller drupelets such as blackberries. Other species develop into harder, fleshy fruits such as apples and rosehips. Strawberries, blackberries and raspberries are known as aggregate fruits; incidentally none of which are berries but develop from a single flower which has many ovaries which swell after pollination into the aggregate fruit.

History

Our association with roses dates back millennia. They have been used as symbols of love and beauty and also to scent soap and colour wine. They are also used in politics and in war as symbols of strength, as demonstrated in British heraldry during the War of the Roses. The appearance of bright and colourful roses with a delicate fragrance is the result of mutations developed by horticulturalists about 5,000 years ago in Asia. These varieties follow the general characteristics of the natural species but differ significantly in other aspects like the multi-petalled flower heads.

Below are just some of the many plants in this group that are common in the UK and across the European continent.

Mountain Ash/Rowan (*Sorbus aucuparia*)

A generally solitary tree growing up to 15m and living for up to 200 years. Its leaves are divided into 5-8 pairs of leaflets all with jagged edges. Each creamy white flower contains both male and



female reproductive parts. Flowers group in dense clusters and develop into distinctive red fruits, the seeds of which are dispersed by wintering birds.

Blackthorn (*Prunus spinosa*)

A densely thorny shrub with white blossoms seen in early spring. This colourful plant is common in hedgerows and the flowers form before the toothed, oval leaves appear. In the autumn the fruit develops into a bitter, blue-black berry known as a sloe which is commonly steeped in gin and sweetened into an alcoholic drink!

Dog Rose (*Rosa canina*)

A fragrant and common shrub. It has a climbing habit using surrounding vegetation for support. It produces pink or white flowers which develop into edible, red hips in the autumn. The plant is covered in sharp, backward curving thorns which have a dagger-like appearance. This may also allude to its former name 'Dag Rose'!

Meadowsweet (*Filipendula ulmaria*)

A heavily-scented plant of damp meadows and waysides. Its flowers are produced in dense clusters on upright, red stems. This aromatic plant fools insect pollinators into thinking there is lots of nectar but it doesn't produce any! The insects however pick up plenty of pollen along the way. Meadowsweet produces salicylic acid, commonly used in beauty products and as a disinfectant, anti-inflammatory and painkiller.

Lady's-Mantle (*Alchemilla spp.*)

The name Lady's-Mantle refers to the cloak-like leaves of the plant. The leaves are pleated and

velvety. Water droplets form on the leaf edges as water escapes through tiny pores. Lady's-Mantle covers a number of remarkably similar, closely related, micro-species, the seeds of which are not fertilised but produced without sex through a process called apomixis. This development has led to many small but distinctly separate species.

Wild Strawberry (*Fragaria vesca*)

A low-lying woodland plant with a distinctive five-petaled white flower. They produce an edible red fruit in mid-summer, unlike its close relative the Barren Strawberry whose fruit remains dry, green and inedible. Another difference between the two species is that the Wild Strawberry produces runners which root forming new plantlets.

Alpine Avens (*Geum montanum*)

There are about 50 plants belonging to the group called Avens. They all have underground shoots called rhizomes and live for many years. Alpine Avens is a plant of the high Alps. It is a low-lying plant with divided, toothed leaves with unequal leaflets. The large yellow flowers are solitary and have six petals. It purportedly has medicinal properties and in Austria is taken as tea to treat rheumatism and gout.

Salad Burnet (*Sanguisorba minor*)

A small plant of grassland and dry banks. Its small leaves are divided into between 3-12 pairs of leaflets and arranged in ground-hugging rosettes. The leaves are eaten as a salad plant or added to summer drinks and have a taste of cucumber! The tiny green flowers have long and feathery red stigmas and are clustered in dense, terminal flower heads. ■

- 1. Dog rose. 2. Blackthorn.
- 3. Meadowsweet. 4. Alpine Avens.
- 5. Rowan. 6. Wild strawberry.
- 7. Salad Burnet. 8. Lady's Mantle.



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

ADVENTURE TRAVEL

SAFETY CONSIDERATIONS FOR PLANNING OVERSEAS EXPEDITIONS AND ADVENTURES

This article may save your business, if you are a commercial provider. It may also save you considerable sums of money by avoiding costly mistakes. It is written for easy reading and in a slightly flippant style, ironically, overseas during what have all been safe travels. It is not intended to be a fulsome exploration of all relevant issues.

WORDS BY MATTHEW DAVIES

Adventure travel and expeditions are becoming increasingly popular. The rise in commercial entities offering adventure tourism packages has been matched by a boom in independent travellers and groups of friends heading overseas on increasingly remote and cutting-edge adventures. Some will return from non-commercial expeditions and decide to set up their own business in the field – but, where do they start? Many of the planning considerations equally apply to exploration and remote-area working.

What you will find below is an overview of *some* of the main considerations when planning independent overseas expeditions and adventures. The summer is peak time for expeditions overseas – but it's a time also others get hit by the arrow of inspiration and starting to plan their adventures for next year or the year after.

Everyone has to start somewhere and after nearly 25 years advising in this field, it never ceases to amaze me that even some well-established organisations aren't aware of the basics. Conversely, I see private expeditions (groups of friends rather than commercial initiatives) where the planning is meticulous and the participants very clued up. Overall, this is a sector where most of the commercial operators are meticulously well-organised and that is reflected in the fact major incidents are rare. There is generally a good safety record.

Clearly, if you are establishing a commercial entity, there are a host of legal considerations, for example, data protection, contracts (The Package Travel and Linked Travel Arrangements

Regulations 2018 apply to holiday travel arrangements booked on or after 1 July 2018), compliance issues (financial protection for customer's money amongst others), liability insurance and Duty of Care considerations that do not impact the organiser of expeditions or adventure travel for themselves and friends.

So here are just some of the issues that I have seen regularly over 25 years advising those in the sector – whether in the risk management, travel risk management or legal fields.

Commercial providers: Good practice and protecting your business.

Corporate Structure

Get it right from the start – protect yourself. While there are various options for legal structure (and you should take advice from your lawyer at the outset), it is highly advisable to at least consider establishing yourself as a limited company. This affords a degree of protection if things go wrong. It does what it says on the tin – limits your civil liability – save in a few circumstances. Get early legal advice – it will pay dividends.

I often ask clients the question, are you insured? If the answer is “no” (sometimes the answer is that they were never told they needed to be...) then I ask them if their organisation is a limited liability company. If the answer is “no” again then I ask them whether they own their own house... then, there's usually a moment of silence and faces go pale.



Liability Insurance

If things go wrong and you end up being sued by a participant, it's good to have insurance. It is even better to have it and to have read it. Most don't, then regret it in the aftermath.

Insurances can cover commercial providers for their liabilities as tour operators – from personal injury and breach of contract ('we didn't receive what we paid for' cases), for professional indemnity – (ie liabilities arising from the exercise of their professional judgement, knowledge and calling), as well as insurance to protect themselves against claims from staff.

Insurance is good. I firmly believe you cannot afford to be in business if you cannot afford insurance.

Now, it's important, essential even, to understand one key lesson – when you buy your liability insurance, clarify via the insurer or broker what incidents you need to report and when. Most policies state that you need to notify the insurer "immediately" of anything that could "give rise" to a claim. That doesn't mean a successful claim, just a claim. So, the adult participant who ignores your advice and twists their ankle wandering on an unsuitable slope – they may bring a claim years later (see below). That claim (based on our simple scenario) is likely to fail, but you want the insurer to pick up your legal bill to defend the claim. Failing to notify insurers immediately of this event – which clearly may give rise to a claim (even an unsuccessful one) and they will not be obliged to indemnify you. Outrageous? Unfair? It's a fact. Work with it. Don't fall foul of it.

Travel insurance

This is separate to liability insurance. When bad things happen and someone becomes ill, it pays

dividends – and saves a lot of cash – to make sure in advance that that person has medical and evacuation cover. In the case of evacuation cover, make sure this is from the point of injury rather than from the nearest international airport.

Contracts and agreements

Commercial providers should have a contractual agreement with their customers. Terms and Conditions are a living entity – they develop as you experience more problems and nuances. Update them regularly – get lawyers to draft them. Ensure you have boxed-off choice of jurisdiction and choice of law.

With overseas third-party providers, if you are using them regularly or for significant parts of your delivery, get contracts in place. Get copies of their insurance policies. When you get sued by your customer years down the line – for something the local ground handler or activity provider did wrong – and the local ground handler has disappeared without a trace, how handy would it be to be able to contact their insurer direct and pursue a recovery from the insurer...

Records are good. They can be worth their weight in gold. Keep contemporaneous documents, educate yourself regarding limitation periods for claims. Generally – but not always – this is 3 years from the date of injury for adults (18 or over), until a child is 21, or 6 years from the date of breach in breach of contract ('I didn't get what I paid for') claims. Buy a filing cabinet, store the documents – for at least a year beyond the limitation period. Evidence is good. Successful defences depend upon it.

The article will conclude in the next edition. ■

Matthew Davies FRGS is a consultant for Remote Area Risk International where he operates as a specialist adviser, Travel Risk Management, Duty of Care and Off Site Safety Management instructor. As well as a specialist Lawyer within this area, he has over 25 years experience in the field, is a Fellow of the Royal Geographical Society and has led expeditions in and trained teams for various environments including desert and the arctic.

He is on the drafting committee for DS:8848 and along with colleagues from the sector is founder of the

C:ORE Risk Conference which will be held at **Plas Y Brenin** on the **4-6 October 2019**.

The event will focus on the central, fundamental risk issues relating to the Outdoor, Remote Area Operations (fieldwork), Education, Exploration and Expedition sectors – with guest speakers from academia, practitioners and invited experts, at this conference they will be addressing many of the issues in this article. The conference is recognised as CPD for members of MTA.

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MIKE PESCOD ON MINUS TWO GULLY ON BEN NEVIS

YOUR STOVE

The most critical piece of expedition kit?

WORDS AND PHOTOS BY SUSIE AMANN AND STEVE KREMER

We may get far more excited about other aspects of equipping a high or cold expedition, but choosing a stove system that works and knowing how to get the most out of it is critical.

We rely on stoves to melt snow for water to keep us alive, we need to have enough (but not too much) fuel and we need to operate them safely to avoid the threat of carbon monoxide (CO) poisoning and other hazards. *If your stove malfunctions it could be life threatening.*

This article is the first of two about stove choices and usage for the types of expeditions that are either super cold (eg -40°C Antarctic/Yukon), high (above 3000m) or both (eg Alaska 5000m and -20°C), where all water comes from melting snow. These conditions all make heavy demands on both the stove and the practice of the user.

A stove system comprises:

- Stove and fuel supply – either liquid fuel (Coleman fuel/paraffin etc.) in a separate fuel bottle with a pump or gas canisters (used either as a gas or as liquid if inverted)
- Pan and lid – a standalone pan (with or without a heat exchanger) or an integrated pan
- Windshield – important contributor to efficiency – either separate or integrated
- Stove board – something to stand the stove and fuel on to stop it sinking in the snow

Stove choice can be baffling as there are so many variations. For a high/cold use, the choice is between liquid-fuel pressure stoves, or gas canister stoves, either with a remote canister or integrated systems. (See *Figure 2*)

Stove selection is driven by the temperature-altitude profile of a given type of expedition. (See *Figure 1*)

What stove systems do mountaineers use at altitude?

The type of trip, size of group and availability of fuel all have a big influence on stove choice. Alpinists cram a lot of climbing into a relatively short period of time so need fast, lightweight snow-melting and water-heating solutions. JetBoil type systems with 110g/230g gas canisters are a staple for the fast and light approach. Slightly heavier MSR- Reactor type stoves with radiant burners are increasingly popular, very fast boiling and the extra weight is more than offset by enhanced fuel efficiency.

Larger and longer expeditions, such as those to the Greater Ranges, might take multiple stoves depending on what fuel source is available. At base camp, liquid/multi-fuel stoves running on locally-sourced paraffin or unleaded petrol can be used, whereas for rapid ascents and lower-temperature high camps, lighter, remote canister gas stoves can be used with inverted gas canisters, or integrated-system stoves with cold-weather gas mixes.

For his forthcoming ascent of Denali, alpinist Andy Kirkpatrick will take two stoves: an MSR XGK-SE as the main stove, and an MSR Whisperlite Universal for redundancy. These will be used with an MSR Reactor heat exchanger pot for efficient snow melting and a lightweight GSI pressure cooker for cooking at altitude.

What can go wrong at Altitude?

CO poisoning is by far the biggest danger when using stoves in a small tent porch at altitude. Even with a perfectly functioning stove, with the reduced oxygen at altitude, incomplete fuel combustion means that dangerous levels of CO can be generated. The effects can be rapid and catastrophic as first the brain and then cardiovascular functions start to deteriorate. Articles by Simon Leigh-Smith, and Paul Ramsden, are essential reading on the subject.

“Quenching” is also a cause of CO generation. Quenching occurs when a cold pot full of snow (and especially one with a heat exchanger base) acts as a heat sink which is powerful enough to reduce the heat of the flame to the point where combustion is incomplete, and CO is generated. The flame may even go out.

CO generation can be avoided by ensuring as much ventilation as possible, and watching the flame. A yellow/orange flame indicates CO is being generated. If feasible, increase the distance between the flame and pot, and loosen wind shields to allow maximum airflow towards the stove. Increase or decrease the flame power to see if that fixes the problem. If the flame refuses to turn a healthy blue colour, move the stove outside.

Other dangers at altitude are generally usage related. Tall unstable systems can get knocked over. Hanging kits are a popular solution if the tent is big and robust enough, though these are not without their dangers.

Stove failure can result from physical damage caused by rough handling on an ascent. All liquid-fuel stoves are designed to be fixable in the field, but at high altitude, with diminished cognitive function, limited time and cold fingers, fixing a stove may be impossible. A backup stove becomes an essential item.

What stove systems are used in extremes of cold?

From the 1980s, outdoor manufacturers began to develop lighter alternatives to paraffin stoves which had been used by polar explorers for decades. More modern liquid-fuel stoves are lighter and more stable as a result of separating the fuel bottle and pump from the burner. The MSR XGK stove has become the most popular and many polar explorers swear by these for reliable snow melting. Ross Gilmore, who adapts stoves for specialist usage, says that the simpler the stove, the less there is to go wrong. He stripped down an MSR XGK to essential parts so there was less to fail and this was used by Ben Saunders for his 1000 mile solo trans-Antarctic expedition.

Fuel economy is a really important part of any long-distance expedition, and this is enhanced by using pots with an attached heat exchanger. The more efficient the system, the less fuel needs to be carried. A decade ago, a common rule of thumb was that when travelling in Polar Regions, the fuel budget should be 500mls per person per day for all hydration and cooking with some reserve. More recent and

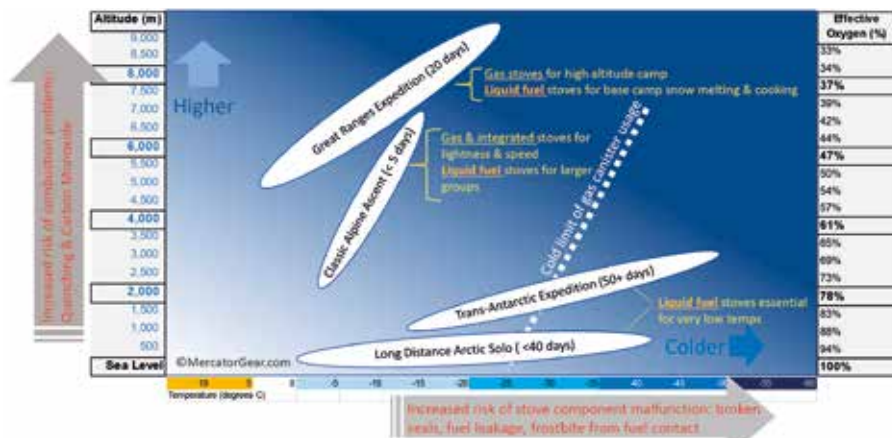


FIGURE 1 ABOVE Stove selection is driven by the Temperature-Altitude Profile for a given type of expedition. RIGHT Snow melting setup for three people at altitude: liquid fuel configuration. © MercatorGear.com. FAR RIGHT Jetboil.



Stove type	Example stoves	Pros	Cons
Liquid fuel with separate pump and fuel bottle - white gas/Coleman Fuel/kerosene/paraffin/petrol etc.	MSR XGK/Whisperlite Kovea Booster Primus Omnilitte	<ol style="list-style-type: none"> 1 Can burn virtually any fuel 2 Works at lowest temperatures 3 Stable 4 Good for Base Camp and extended expedition use in cold environments 	<ol style="list-style-type: none"> 1 Priming requirement dangerous if cooking in tent 2 Frequent field maintenance with 'dirty' fuels 3 Liquid fuel harder to handle than gas 4 Less control of flame - no simmer 5 Cold can cause components to become brittle
Remote canister gas stove - invertible	MSR Windpro Optimus Vega Primus Express Spider Kovea Spider	<ol style="list-style-type: none"> 1 Burns canister gas in liquid form when inverted 2 Stable 3 Ease of use 	<ol style="list-style-type: none"> 1 Good stove practice needed at low temperatures
Integrated systems with gas canisters	MSR Reactor Jetboil Zip	<ol style="list-style-type: none"> 1 Efficient so less fuel needs to be carried 2 Can be hung if desired 	<ol style="list-style-type: none"> 1 More difficult to use in lower temperatures as relies on burning gas [not liquid] 2 Less stable, especially with large gas canisters

FIGURE 2

customised stove systems can be 25% more efficient, saving several kilograms of fuel at the start of a 50-day solo expedition.

What can go wrong in extreme cold?

The bottom line is that stove failure can be life threatening, and in polar exploration temperatures below -40, are quite common. At these extremely cold temperatures, synthetic or rubber seals start to solidify and become brittle, resulting in fuel leaks. Flexible fuel lines on liquid-fuelled stoves can also snap or crack in the extreme cold.

A solution is to keep fuel pumps and fuel lines (or the whole stove) inside clothing and sleeping bags so that they never get cold enough to break. Spare fuel lines, fuel pumps and O rings as well as maintenance tools are also essential so that any breakages can be fixed.

Burns from super cooled fuel are the biggest danger. At minus 20, liquid fuel will deliver a nasty burn to the flesh. At -40, it can freeze the flesh solid. In these extremes of temperature, heavy duty rubber fuelling gloves are an essential piece of safety equipment to prevent serious hand injuries while handling liquid fuel.



Susie Amann is an International Mountain Leader with a love of mountaineering on skis in cold and high places.



Steve Kremer is a tech industry consultant and founder of Mercator Gear, stove importer and has a special interest in stove innovation.

Summary

- Your choice of stove/s is driven by the type and duration of expedition, the range of conditions you expect to encounter and the overall nutrition/hydration plan.
- Carbon monoxide poisoning is always a danger at altitude, so watch the flame and know the signs!
- Simple light weight Jetboil/MSR Reactor systems can work for rapid Alpine-style ascents to 6000m.
- Liquid-fuelled stoves are the only option for long distance polar expeditions in extreme cold. Careful handling is needed.
- For high and cold trips, either white gas liquid-fuelled stove systems or invertible gas stove systems can be used.

The next article will cover practical tips for the most efficient stove and fuel use, including estimating how much fuel you need. ■

With thanks to: Ben Saunders, Andy Headings, Dr. Mark Hines, Andy Kirkpatrick, Ross Gilmore, David Hamilton.



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THE LEADERSHIP CLINIC

WORDS BY DR SAMANTHA McELIGOTT

The third instalment in the series examining readers' questions about leadership. This time we're focussing on simplifying the INSPIRE leadership model.

Until we understand and are comfortable with the detail of the model, it can put undue pressure on us as practitioners to strive to become the best we can be in each of its seven areas. What we need, then, is an overarching framework that allows us to simplify the seven behaviours into fewer (and therefore easier to digest!) categories.

Fortunately, we have just the thing at hand. In collaboration with British Canoeing, I have been working with the Mountain Training Association (MTA) to develop a collection of leadership resources for its members. As part of this, and to bring us up to speed with our British Canoeing partners, some of the new (and upcoming) leadership resources focus on the **Vision, Support, Challenge (VSC)** model¹, which encompasses all seven of the INSPIRE transformational leadership behaviours.

The VSC model can be used to categorise the seven INSPIRE behaviours, so that we can begin to work out what sort of leaders we are. In this way, we can reflect on our strengths and weaknesses within the INSPIRE model and work out if we have a preference for any particular category. How might the visionary leader for example ensure they give their followers the right amount of support and challenge? Similarly, how might vision and challenge be introduced by the supportive leader?

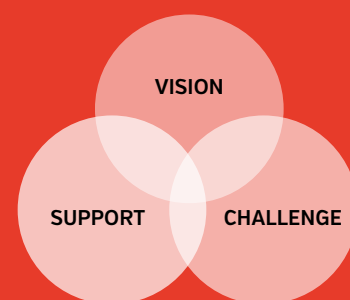
The table below gives us a basic categorisation of the seven INSPIRE behaviours:

At a glance it's possible to see the basic definition of each category and know where our strengths lie. A well-rounded, highly effective leader can move

between the three categories according to the needs of the group and/or situation.

If you wish to go one step further, you can seek to improve each behaviour by examining it in respect of the VSC model. Leadership research tells us that *all* seven of the behaviours contain elements of each of the three umbrella categories. For example, the behaviour of "Setting the example you want to see in your followers" provides a) Vision, in that the leader demonstrates the way the followers aspire to behave; b) Support, by the leader coaching and encouraging followers to do as they do; and c) Challenge, for the followers as they aspire to achieve, and maintain the example set by the leader.

How about you? Do you lean towards one approach over the others, or are you quite balanced? How might you improve your effectiveness as a leader using the VSC model? Are you ready to challenge yourself further and work on the VSC model *within* each behaviour? MTA members can take a self-assessment test (downloadable from the online MTA Members Area) to see where their strengths lie in terms of the seven behaviours, and how they translate into the categories of Vision, Support, and Challenge. As with the leadership performance profile (also on the resources page), the self-assessment tool could also be completed by people who know your leadership well, providing you with some valuable 360 feedback. More information about these resources can be found here: <http://www.mountain-training.org/associations/mountain-training-association/about/association-news/mta-leadership-resources> ■



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

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

1. Hardy, L., Arthur, C. A., Jones, G., Shariff, A., Munnoch, K., Isaacs, I., & Allsopp, A. J. (2010). The relationship between transformational leadership behaviors, psychological, and training outcomes in elite military recruits. *The Leadership Quarterly*, 21, 20-32.



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A fresh look at the information we need to become skillful; the role of instructions, demonstrations and feedback in coaching.

Listening to the elite

During my undergraduate years back in the mid-90s, two conversations left a lasting impression on me. One was with the paddler Aled Lloyd Williams, then a member and coach of the UK Rodeo Team (now known as Freestyle); the other was with Johnny Dawes, arguably the most revolutionary climber of that era.

Aled had persuaded me to go paddling with a group of friends at Stanley Embankment in Wales. With great amusement they must have watched as my micro-bat ricocheted back and forth like a ping pong ball over the waves before being unceremoniously spat off. I landed upside down among the boily eddy lines; failing to roll up more times that I could count, I went for a long swim. Everything happened so fast. I had no control and no idea what was happening. I then watched in awe as Aled dropped onto the wave, carved and spun gracefully and with purpose for what seemed like an age. He twiddled his paddles above his head and then dismounted from the wave like a gymnast executing a full summersault. He landed in the eddy next to me, the right way up, of course, facing the wave and with a huge grin!

Later, back at the bar I asked Aled how he'd done that. I listened in fascination as he excitedly described the wave features and surrounding environment as though they were a four-dimensional movie of movement opportunities; flitting from fish to bird's-eye view, describing balance points and his position at every moment in the rapidly-changing dimensions of his environment. It was like listening to someone describe an acid trip or a sci-fi movie.

A short time later, with Aled's conversation in mind, I took the opportunity to ask Johnny Dawes ('JD') about his dyno-ing (jumping for climbing holds). JD's descriptions of his experiences were even more alien to me than Aled's paddling ones. JD had an exquisite understanding and awareness of the dimensions of time and space, pressure and feel.

He talked about the musicality of the movements, acceleration and inertia, slowing down to 'land' on the holds. He even hummed some of the dynos to me!

Like Aled, he was not describing movement form, rather an environment of movement possibilities and opportunities that I couldn't begin to comprehend, or share. There was something utterly fascinating about the way Aled and JD experienced and described their respective sporting worlds.

25 years later, I asked Aled and JD for their thoughts on these conversations. I understand human memory enough to know how much it can distort over a period of time. Both agreed though that my account was correct. JD's replied: *"I agree with you totally. The ecology of the situation must choose the response. That is down to live-ness, precision information and listening to when to move. I know this. So there you are. It's a dance, not a defined task. Even with something solidlike like rock. The relationship is not so solid. You move ... it moves."*

You may be wondering why I am telling you this story at the beginning of an article about conveying information in coaching. Well, when thinking about what information learners' need, I always come back to these conversations (and similar ones since) to consider the differences between the way Aled and JD talked about their performance, and the information I've always been encouraged to convey to those I coach.

What do we use information for?

How do we use instructions, demonstrations and feedback to develop the skill of those we coach? To keep things simple, we will set aside the conversations about agreeing goals and framing expectations for now and focus on the information that we can give during practice.

Many of the coaches I work with understand that they utilise instructions, demonstrations and feedback to convey information to their learners

WORDS BY MARIANNE DAVIES

PHOTO Sam Davies.



about correct 'technical movement form'. This typically narrows the learner's focus of attention to specific parts of the body or equipment, and reduces movement exploration and variability. Feedback is used as a mechanism for informing the learner of the gap between what they have just done and the ideal technical template; like a game of dynamic spot the difference.

Coaches have also historically been encouraged to communicate this information about movement form based on the VAK model of individual learning styles (VAK stands for visual, auditory and kinesthetic). According to this (now thankfully debunked) model of preferred learning styles, there are three key ways in which information can be exchanged: through verbal instructions, visual demonstrations and practice.

All of us have a preferred way to receive information and if the coach can match that, we'll find it easier to understand the information they are trying to convey.

ABOVE Pete Robins on *Manic Strain* in Dinorwic Quarry.
© Jethro Kiernan.



Marianne Davies's practical experience includes more than 20 years coaching and 8 years as a coaching manager, coach educator and assessor. This is complimented with active Mountain Rescue experience, giving an insight into why things may go wrong. Marianne is currently doing a PhD in Skill Acquisition at Hartpury University. Her main interests are climbing, paddlesports and equestrian activities.

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Rookie paddlesports coaches are still encouraged to use all three by giving a silent demonstration using 'correct technique', adding some targeted verbal instruction (eg what is happening with the body, the boat and the blade), and then setting up some structured practice, often done on an environmental 'blank canvas'; on flat water and in isolation of a context. We might perhaps liken this to coaching climbing on an artificial wall and discovering that it creates movement patterns that are inefficient for rock (as noted by Trevor Massiah in *The Professional Mountaineer* 21-22). This scattergun approach of conveying information with the three information sources was recommended to begin with so that the coaches were providing the same information in a variety of ways.

Using this system of instruction, demonstration and feedback as a mechanism to relay information about the difference between current and ideal movement form (ie position of the body) is based on a theory of learning known as *information processing*. This theory of learning came from computer programming analogies and has a focus on technical templates, explicit cognition and producing movements in isolation of the dynamic environments in which they will eventually be performed in and embedded.

Elite performers like Aled and JD are often described as being unable to remember how they learnt. They have supposedly forgotten the declarative, technical and form-based information they used to learn. But what if they have not forgotten? What they describe is the opportunity for movement and action being offered to them through their perceptions of the environment. In other words, they are paying attention to, and have a deep understanding of the environment they're in, ie the performance environment. What happens if we put aside the information processing model of learning, explore some different ones, and listen to what the elite performers say instead of dismissing them simply because we're not expecting to understand their experiences?

In the following article of this series we are going to explore what information is used when learning and performing movement skills. We will also examine the wider context of the learning experience. We will compare this to what information highly-skilled performers like Aled and JD describe experiencing and attending to; as well as the wider context in which they perform. Finally, we will explore what this may mean to us as motivated enthusiasts, athletes or coaches, and how we can develop skillful performance in a way that functionally supports our information, practice and social needs. ■



COLD AND SWEATY? YOU NEED TO FOCUS ON THE SKIN



© Euan Whittaker, ClimbNow

Many people venture into the outdoors to undertake more technical challenges during the winter months often under extreme cold with reduced light. The selection of appropriate winter clothing is vital to increase your enjoyment and comfort levels especially when you know your body will get hot even though its cold out. In cold weather your choice of clothing is as important as to how you wear it.

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MY HELMET MY CHOICE

VIVIAN BRUCHEZ // Early starts, exploration, animal tracks, adventures, contemplation: I love the mountains, and life! Why choose the easiest path when the most beautiful one is possible. // #helmetup



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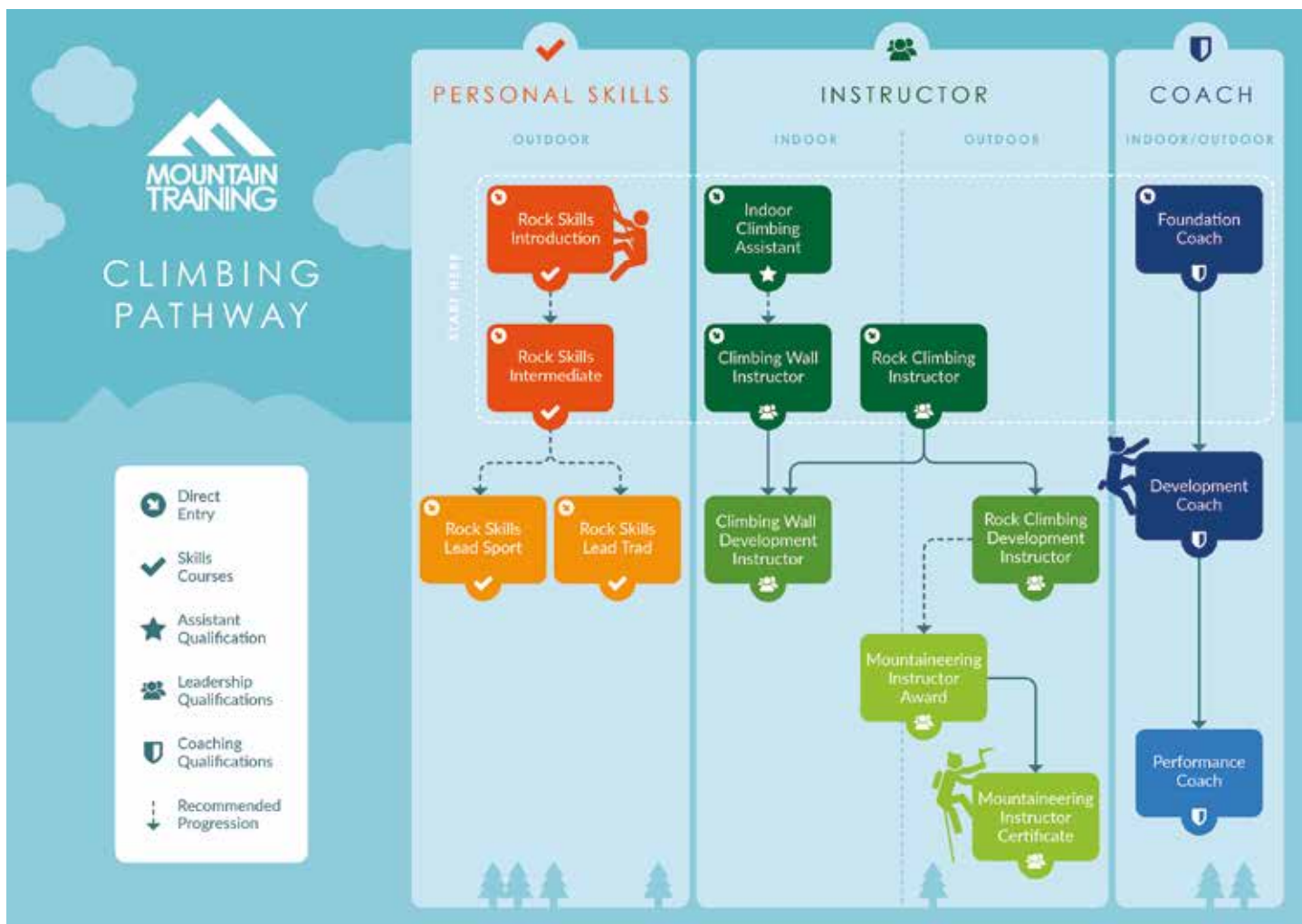
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ABOVE LEFT Learning to place gear. ABOVE RIGHT Checking the knot. Both photos © Mountain Training.

New schemes from Mountain Training

At the start of this year Mountain Training launched two new schemes: **Rock Skills** and **Indoor Climbing Assistant**. Both schemes are designed to enable a more diverse range of people to get involved with climbing and, with many of you amongst the delivery workforce, we're excited about their future.



For those of you who don't know much about these new schemes, here's a brief overview:

Rock Skills

This is a series of four courses to develop participants' personal rock climbing skills. They can attend the most appropriate course for them, depending on their existing experience and the scheme caters for complete beginners through to indoor lead climbers and outdoor seconds who want to learn more about rock climbing.

Rock Skills Introduction – A one day course to get people climbing on real rock. Great for people new to climbing as no previous experience is required. *Minimum age: 12.*

Rock Skills Intermediate – A two day course to establish the fundamental skills of managing oneself safely on rock climbs. It is aimed at people with some experience of climbing and belaying who want to know more about moving well on rock, placing protection, building belays and seconding a route. *Minimum age: 13.*

Rock Skills Learn to Lead Sport Climbs – A two day course providing an introduction to leading bolt-protected sport climbs for competent climbers. *Minimum age: 14.*

Rock Skills Learn to Lead Trad Climbs – A two day course providing an introduction to leading traditionally protected climbs. It is aimed at climbers with experience of seconding trad climbs or leading indoors. It's ideal for those new to trad climbing who would like to become Rock Climbing Instructors. *Minimum age: 14.*

Registration: free for u18s, £20 for adults.

Indoor Climbing Assistant

This qualification is designed to train and assess people to actively support a qualified instructor to deliver a climbing session. It is ideal for anyone who wants to be involved in facilitating a great climbing session whilst under the direct supervision of an instructor. It could be an ideal opportunity for young people leaving the NICAS scheme, teachers, parents, youth workers and carers.

This is a new level of qualification for Mountain Training but the concept of assisting is nothing new. Most sports have assistant coach qualifications and some climbing walls have used teachers, parents and younger climbers to assist on sessions for years, often in a fairly informal way and with little in the way of national guidance or recognition.

The Indoor Climbing Assistant qualification provides a structured syllabus for candidates, delivered in a combined training and assessment course. It is accessible to anyone over the age of 16 who is competent in basic climbing skills such as putting on a harness, tying in, belaying and checking their partner, and with some logged experience (5 sessions) of belaying, not necessarily climbing.

Minimum age: 16. Registration: £20.

Please help us spread the word about these new schemes and for more information, visit the website: www.mountain-training.org.

The final output from our review of the climbing qualifications will be Rock Climbing Development Instructor, due to be launched in spring 2019. This qualification is for experienced instructors wishing to develop participants' rock climbing proficiency, which may extend to lead climbing, using single pitch crags. ■



Information about the Rock Climbing Development Instructor will follow in the next edition.



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BOOK REVIEW

HOSTILE HABITATS

SCOTLAND'S MOUNTAIN ENVIRONMENT
REVISED AND EXPANDED 2ND EDITION

by Mark Wrightham

Reviewed by Dorian Thomas

Hostile Habitats (which I suspect is on many of our bookshelves), first published in 2006, was revised and re-released in January this year. With inputs from some of the country's leading experts in their field, the book offers a detailed introduction to the Scottish Mountain environment, though for the most part the information therein can easily be applied to other mountainous areas within the UK. I have used it in Brecon, Snowdonia and other regions during my career as a Mountain Leader.

Besides the addition of "Revised and expanded 2nd edition" the front cover remains the same. The overall format and layout of the book have remained more or less the same with each subject contained within its respective chapter (nine in total) allowing quick and easy to-look-up information.

Inside, the chapters have undergone a complete review. The text has been updated with the latest research and knowledge, and includes 23 additional pages of information. For easier identification better photographs have been used and some information has been reorganised making the understanding of the subject easier. Below are some of the changes within each chapter:



- *Climate* – Climate changes have been updated to reflect current research and data, more images have been added, for example lenticular cloud formations, rime ice and a graph depicting the days of lying snow versus elevation.
- *Geological Foundations* – Numerous photographs have been updated especially the ones used for identifying various rock types, making rock type identification much easier.
- *Shaping the Landscape* – The main text has been updated along with pictures allowing easier identification of landscape features.
- *Vegetation Cover* – The plant identification section has been improved by the addition of twelve more plants; plants are better organised by being grouped according to type.
- *Invertebrate Life* – The identification section has three more insects and again a subtle reorganisation according to type to aid quicker reference.

- *Mountain Birds* – The main text and images have been refreshed including a diagram showing an actual flight track of a young golden eagle over seven months.
- *Mammals, Reptiles, Amphibians and Fish* – The main text and photographs have been updated, including additional paragraphs on whitefish and how fish populations are being influenced by human activities.
- *Human Traces* – The main text has been revised to include additional paragraphs on military activity, mapmaking and four additional human traces types added ie ancient artefacts, aircraft crash sites, historic hill paths and grouse butts.
- *The Future of Our Mountains* – Paragraphs relating to the future management of our mountains have been added.

To conclude, like most people, I already had a basic knowledge of the upland environment, which was vastly improved through reading the original *Hostile Habitats*. The 2nd edition builds on what was already an excellent book, the text updates take into account the latest knowledge and research to ensure that the book continues to be relevant and accurate. Most importantly, the easy-to-understand writing style has been improved, providing the ability to easily read, retain and recite information thus enabling us to inspire and educate others while leading in the mountains. ■

CICERONE – CELEBRATING FIFTY YEARS OF ADVENTURE 1969-2019 by contributing editor Kev Reynolds

Reviewed by Mike Margeson



Inspiration from the word 'go'. The Milky Way over the Tre Cime di Lavaredo on the front cover immediately drew my attention, conjuring up the epic routes of Cassin, Comici and Brandler-Hasse. Breaking away from the format we've come to expect, this 50th year celebratory publication is no normal Cicerone guide. The editor, Kev Reynolds, has done a fantastic job bringing together the passion, commitment and spirit

of adventure from the Cicerone team of guidebook authors. Their adventures from all over the world have given successive generations of would-be adventurers ideas, dreams and inspirations.

There is a fascinating short historical introduction describing the early days, working at the dining room table with Walt Unsworth and Brian Evans to produce high quality guides for outdoor enthusiasts. When eventually taken on by Jonathan and Lesley Williams, the essence, nature and quality could easily have been lost. They may in their own words have been on a steep learning curve, but they seem to have survived it!

The book is divided into three main sections: adventures in the UK, Europe, and the wider world. There is something for everyone, from running the Bob Graham round and the White Mountains of Crete, to the wild Torres del Paine Circuit.

As an MIC holder and mountain rescue volunteer, I found myself going straight

to the final chapter entitled Mishaps and Misadventures. Colin Mortlock wrote about the nature of true adventure and how that line between real adventure and misadventure is very fine but sometimes where the maximum learning and lifelong experience lies. With winter now upon us, I was particularly taken in this section by Mike Pescod's piece on being avalanched while working with clients on Aonach Mor. His reflections on the heuristic traps or human errors and poor decision-making to which we are all prone, however skilled or experienced, is food for thought.

In conclusion, this book is much more than the company's celebration of fifty years. It is certainly more than just a coffee table book, taking aside the stunning photographic content. For anybody looking for a gem of information or inspiration for their next adventure, this could be just the place to start. ■

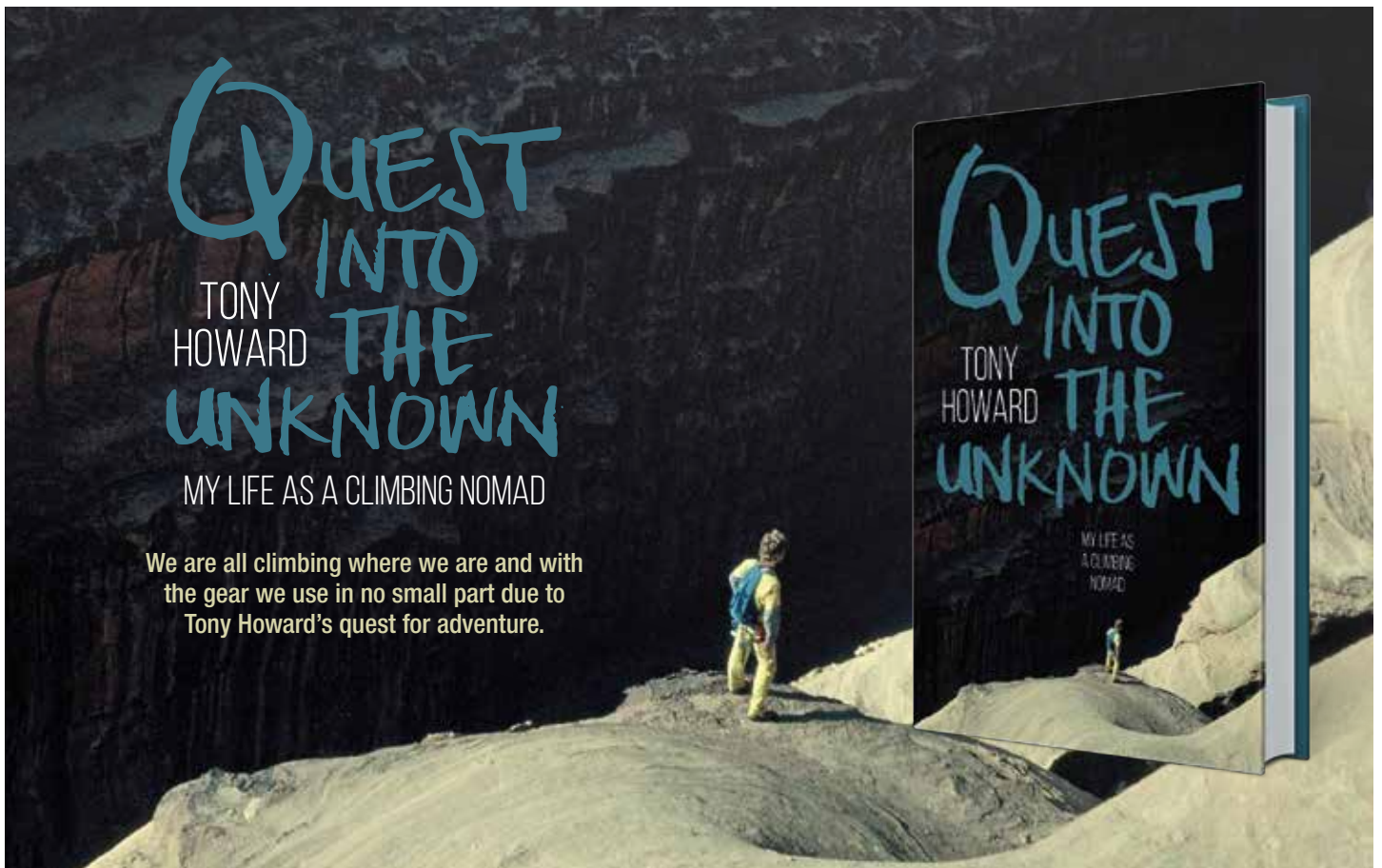
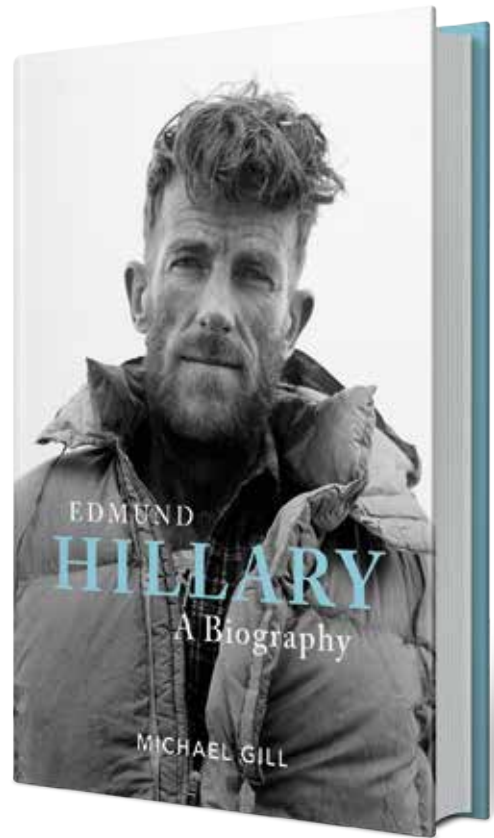
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