ANNUAL NEWSLETTER MOUNTAIN VIEWS PUBLISHED 2019

THE SUMMIT

FOR HILLWALKERS AND WALKERS IN IRELAND

WALKING ALL OF IRELAND'S NATIONAL TRAILS

Tough Soles take on a 4,000km challenge

AN IRISH MOUNTAIN GATHERING

THE ANNUAL EVENT FOR HILLWALKERS AND OUTDOORS ENTHUSIASTS

FEB 22ND

LOCAL100

Discover the amazing hills right on your doorstep

SAREK

A trek through Europe's last great wilderness

ELBRUS

Getting to the summit of Europe's highest mountain

TRIGS AND TRIANGULATION

The history of the trig and it's role in Ireland's mapping

GALLERY

The best photography from MountainViews members in 2018

Promontory on Slieve League.
BRENDAN O'REILLY

Escape to the outdoors

Our Annual community effort continues to grow with 25 submissions this year. To respond, we've increased the size to 60 pages which includes 13 articles. We're categorising them to even coverage by topic. Warm thanks to all contributors.

We hope you will enjoy the mix, including summiteering, island walking, trekking abroad, trig pillars, environment and access, and welcome new topics such as waywalking (Waymarked Ways that is). And challenge walking and a family epic. A lot to savour.

So choose some calm time to enjoy our Annual and be inspired to try something new for 2019. Community effort: not funded by advertising or selling your private details.

Doesn't mention b**xit.

Simon Stewart, MountainViews.ie founder

Cover: Late afternoon light falls on a snow-capped Errigal
PURPLE PEAK ADVENTURES

Contents

The Summit Annual Newsletter 2018 is published by the MountainViews committee in February 2019.
The usual MountainViews Summit Monthly Newsletter will return for March. Should you wish to comment on any article then you are free to do so through the Motley Views General Forum within the usual terms of MountainViews.

Editor: Simon Stewart **Design:** Brendan O'Reilly **Contributors:** as shown for each article and photograph.

Newsletter archive: View previous newsletters *https://mountainviews.ie/newsletters/*. View MountainViews at *https://mountainviews.ie/*

The MountainViews Gathering 2019


Éanna Ní Lamhna

David Owens looks forward to another great evening for Irish hillwalking

Although winter is not the busiest or best time for hillwalking, it is a good time to reflect on the past year's walking, renew old acquaintances and begin planning for the year ahead. And what could not come at a better time to fire the passions and provide the inspiration, but the Annual MountainViews Gathering (open to all), to be held, as usual at the **Lansdowne Hotel, Dublin 4, on 22nd February 2019.** Put that date in your diary now!

As usual the Gathering provides an opportunity for hillwalkers to meet old friends and new, to socialise with like-minded people and to hear a range of great speakers on a wide range of walking-related topics and to start the planning for 2019's walking.

This will be the 11th year of the Gathering and over that time, the event has become a permanent fixture of the hillwalking calendar, and provides a coming together of hillwalkers from all corners of the island of Ireland, and often beyond. The MV site has attracted interest from many overseas walkers, many have begun completing our lists, and we are delighted to welcome some of these to our Gathering most years. The Gathering is also our opportunity to present awards to those who have completed specific lists or who have given outstanding service to the hillwalking & MV community.

At last year's event c.90 attendees were treated to superb presentations from our two main speakers, Dermot Somers, who needs no introduction in hillwalking circle, and Shay Walsh, the Chairman of Mountain Meitheal. Dermot drew from his wide experience of travel, walking and mountaineering to deliver a highly entertaining and illuminating talk entitled, 'Cross-country: the view from above', while Shay took us through the valuable work programme of Mountain Meitheal. Simon Stewart also updated us on MV developments over the year while the event was excellently compered by our own Peter Walker. In addition, some 20 list completers received their awards.

This year's speakers promise to be equally interesting: **Éanna Ní Lamhna** is an Irish biologist, environmental consultant, radio and television presenter, author and educator. She is one of the best-known public figures in Ireland in the area of nature and the environment, and was listed as one of Ireland's "Influential 100" in 2012. She is also a walker who has herself completed the Irish County Tops. Her talk will be entitled 'Wildlife on our hills – by day and by night'.

We also have a young duo, Ellie Berry and Carl Lange, who call themselves **'Toughsoles'** (toughsoles.ie), and who have set themselves the goal of walking every National Waymarked Trail in the country, a total of 42 trails and 4,000km. Their project is ongoing but currently stands at 35 trails and 3,000km completed. Ellie is a professional photographer and the couple have kept a blog and taken a lot of photographs and videos throughout the challenge, so their presentation should be interesting.


Ellie and Carl of Tough Soles

On top of that, **Simon** will give a further update on the development of the MV website, while **Peter Walker** will compere in his own inimitable fashion.

As always, we expect it to be a great night – hope to see you there!

Note the place & date:
Lansdowne Hotel, 27 - 29 Pembroke Road, Dublin 4, 8pm, Friday, 22nd February 2018.
Doors will open from 7.30pm for an 8pm start.
There will be a charge of €10 on the door.

Further events

• 6th April, MV outdoor meet in the Mournes
• 8th April 2019 There will be a talk by members Martin Critchley and Sharron Schwartz of "Purple Peak Adventures" on "Trekking the Realms of Vulcan: Adventures in the volcanic highlands of Iceland and Ethiopia." Note: Date changed from previous advertising. More details in March newsletter.

AN IRISH MOUNTAIN GATHERING 2019

THE SUMMIT OF IRELAND'S HILLWALKING CALENDAR

Guest speaker **Éanna ní Lamhna** well known broadcaster on RTE, will speak on "Wildlife on our hills - by day and by night" In the past Éanna completed the Irish county highpoints so she will know what can make walking interesting. She will describe "common wildlife - particularly birds - that can be seen on hill walks especially if you are a normal walker out enjoying the whole outdoor experience - as opposed to a speed merchant whose whole aim is to cover the ground in record breaking time and takes in none of the surroundings."

Toughsoles a young and dynamic duo who have already walked most of the Waymarked Ways of Ireland will talk about their experiences with what they have found on their pioneering effort to complete this huge undertaking.

There will be the usual awards ceremony for people who have completed specific challenges or done something for hillwalking or MountainViews.

Don't miss the annual MountainViews/Walkers Association of Ireland annual evening of fascinating talks, humour, socializing, the awards for Ireland's best summiteers, and a beverage or two.

Where: Lansdowne Hotel, 27 -29 Pembroke Rd, Dublin 4.
When: Friday 22nd February, 8pm (Doors open 7.30 pm)

There will be a charge of €10 on the door. Directions here www.lansdownehotel.ie.
Parking available nearby at Wellington Road.
The excellent bar facilities allow you to have a drink with other hillwalkers after the event. You can get a meal before the meeting also. Should you wish to stay overnight then please consider staying with the Lansdowne.

MOUNTAIN VIEWS

MountainViews members walks

At the summit of Galtymore
LIZ ASHTON

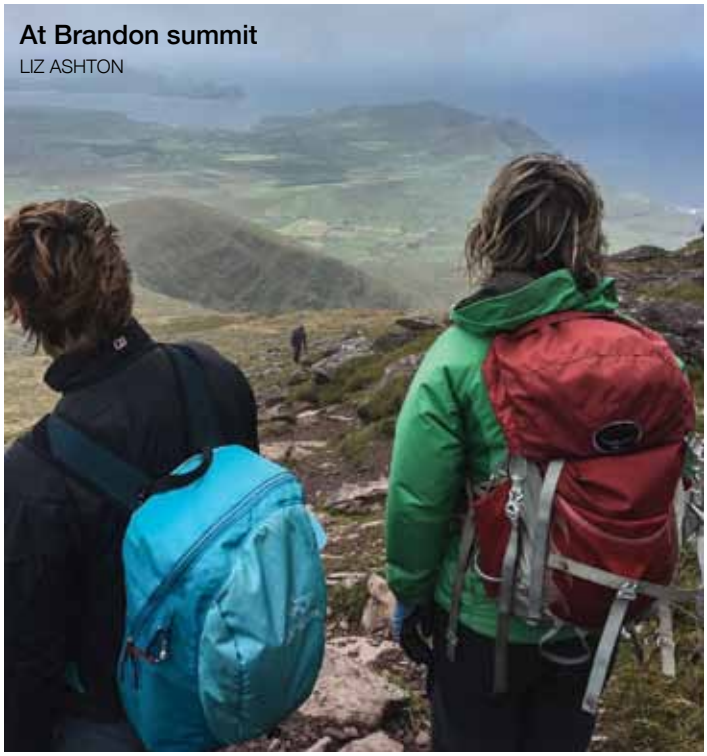
A great opportunity to go somewhere different and meet other MountainViews people writes Liz Ashton

Gallarus Oratory
LIZ ASHTON

The first of the Mountainviews Members walk series took place in October 2017. Previously know as Scavvy walks they continue to be an opportunity for members of the Mountainviews community to meet up, possibly in an area of the country you may not have walked in before followed by drinks and a meal locally that evening.

The first walk was based around Westport where the Glendahurk horseshoe in the Nephin Beg range of mountains was tackled. Crossing the

The Corranabinnia Ridge, Nephin Beg Mountains
BRENDAN O'REILLY



At Brandon summit
LIZ ASHTON

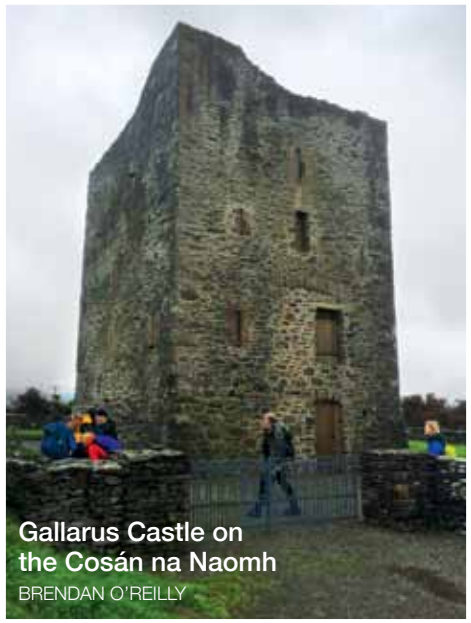
narrow arete to the SW summit of Corranabinnia was a highlight of the walk.

In April of 2018 a walk was arranged in the Galtee Mountains. At the request of most walkers in the group who had never been up to Galtymore the route was modified and we were rewarded with spectacular views from the summit.

September 2018 saw the walk location moving to the Dingle Peninsula where the plan was to walk the Brandon ridge from the Connor Pass, but the weather was inclement to say the least! Heavy rain, high winds and poor visibility would have made the walk a foolhardy undertaking. A walk following an ancient Pilgrim Path from the foot of Brandon to Ventry Cosan na Naomh was substituted.

The weather improved sufficiently the following day to allow a quick trip up Mount Brandon for anyone willing and able to do so following a night out in Dingle!

THE COSÁN NA NAOMH ROUTE IN SEPTEMBER 2018



Gallarus Castle on the Cosán na Naomh
BRENDAN O'REILLY

The next walk is scheduled for Saturday April 6th. Having held walks in the West, Mid-West and South West of the country the venue on this occasion will be in **Newcastle Co Down, the walk will include Slieve Donard and Slieve Commedagh.**

There will be several options on the walk so it can be shortened or lengthened to suit the group and the weather conditions. We will also meet up socially in the evening in Newcastle.

The walks give everyone a chance to meet fellow Mountainviewers, walk somewhere different with like minded people and enjoy this wonderful country. Why not make this the year for you to come along and join in? ■

Signs at Luggala, Co. Wicklow
MOUNTAINEERING IRELAND

Access and the mountain environment - fundamental issues for all

MountainViews is pleased to include this account of what Mountaineering Ireland are currently doing in relation to Access on the island of Ireland. As a sport focused group, MV has made suggestions in the past for example here (https://mountainviews.ie/newsletters/month/2018-12/#access) which suggested: "Aligning Sport with Access", "Raising Status of the Wild" and "Virtual Signposting".

TTL;DR? there's a lot in the following article certainly, but well informed and concise as such a substantial topic can be.

Looking towards Caher, MacGillycuddy's Reeks
MOUNTAINEERING IRELAND

Ensuring continued access to Ireland's mountains is high in the priorities of Mountaineering Ireland, the representative body for hillwalkers and climbers in Ireland. Every consultation, every Annual General Meeting, confirms that the membership wants this. Our agreed policy of active pursuit of reasonable access to the upland areas and a network of routes allowing for access to these areas for responsible users, has been developed into principles, a good practice guide and policies on specific issues such as payment for access. Clubs and individual walkers turn routinely to Mountaineering Ireland when they meet problems on the ground, so emerging problems and new solutions can be brought to light quickly.

Background on Ireland

Ireland is a particular case as regards access to the countryside and in particular, to the unfenced uncultivated lands and climbing crags which we want to use. In the Republic, access to these lands, whether privately owned or state owned, is permissive and mostly informal. In Northern Ireland, as in England and Wales and Scotland, there are statutory provisions by which local authorities can designate open access lands. These have no equivalent in the Republic. Private member's bills in 2008 and 2013 to this effect did not succeed. The main focus at national level in the Republic is on voluntary access agreements with landowners and financial incentives for them for path creation, often in lower lands. And in Northern Ireland, unlike in England and Wales and Scotland, the statutory powers to designate open access lands have barely been used.

Problems, unfairness and irritation

What we are seeing on the ground now is concrete problems such as parking becoming substantially more acute as the numbers walking the hills have increased. Also, a sense of unfairness among some landowners that others, notably commercial guides, are making money based on access to their lands. A recognition, nevertheless, that hillwalkers and climbers bring money into rural areas. In some places, solutions to access problems are being developed. In two areas (MacGillycuddy's Reeks, Clonbur), a Mountain Access Area model proposed by the state is being piloted. In this model, an area of open access is defined, access

points are agreed, parking and necessary stiles and signage are provided, and a management arrangement is put in place. Hillwalkers are expected to be responsible, and landowners are indemnified by the state for any claims by recreational users under the Occupier's Liability Act. At this stage, particularly in the Reeks, there is intense irritation that the state has not yet put its long-promised indemnity arrangement in place, so the feasibility of this model for other mountain areas is still hard to judge.

Mountaineering Ireland continues to use every opportunity to draw attention to the weak bases in Ireland for the access to the open countryside which many take for granted. We start with publications, our own Irish Mountain Log and social media, MountainViews and the press. In the case of Luggala, we are pushing for state purchase of the open uplands. We are an active player in all discussions, technical and political, at national level on countryside access. We are strengthened in these national discussions by knowledge of local issues and by solutions being found at local level.

Access and the sustainable use of mountains cannot be pursued separately. Sometimes the link is evident - unsustainable, concentrated footfall, path erosion, damage to peat etc. Sometimes less so. The contribution of Ireland's mountains to water management, biodiversity, climate protection is great but it is also fragile. Farming practices, land use choices, recreational use - all have consequences for mountain environments. The Common Agricultural Policy of the European Union is being renewed for the period 2020-2027. Among many changes, an option being explored in marginal farming areas including uplands in Ireland is the reorientation of the subsidies which farmers receive to focus more strongly on public benefits from land management, notably but not exclusively in climate and environmental protection. Changing times for us all.

Local and national action

In a recent discussion bringing together hillwalkers and climbers from across the country dealing with access and the mountain environment in various ways, organised by Mountaineering Ireland's Access and Conservation Committee, the general sense was that these issues are fundamental not only to the future of our sport but also to Mountaineering Ireland's purpose and identity. Action should continue on all fronts. Local and national action must continue to support each other. This involves all of us. Experience and expertise needs to be shared. And we need to ensure that our practices and training, within clubs and other organisations bringing people to the hills, reflect the importance, now and in the future, of access and the quality of the mountain environment. ■

Helen Donoghue
Chair, Access and Conservation Committee
Mountaineering Ireland

Helen Lawless
Hillwalking, Access & Conservation Officer
Mountaineering Ireland

(Note: Hillwalking is also represented in Northern Ireland by the Ulster Federation of Rambling Clubs.)

Helen Donoghue, Chairperson of Mountaineering Ireland's Access & Conservation Committee with committee member Vincent McAlinden, at Lough Gouragh in the MacGillycuddy's Reeks
MOUNTAINEERING IRELAND

Reflections on completion of a Local 100 challenge

There's a wealth of interesting hills on your own doorstep writes Pat Casey (CaminoPat)

Descent to Gougane Barra from Foilastookeen
PAT CASEY

Some 2000+ of the people using MountainViews do summiteering at least part of the time and this article discusses the experience of doing it. In this case a number of people had decided to summiteer as a group. The article makes some strong points about having sport goals that minimise damage.

I have been to the Mountain

In November 2016 at the furthest point from my home outside Cork City, I bagged Trostán summit in the Antrim Hills and thereby completed the County High Points Challenge. The achievement was shared with other members of a Cork walking group that had spent nearly two years wandering the highways and byways of Ireland, seeking out and climbing the highest point of all 32 counties. While standing on that last summit the question was quickly posed amongst our group:
"Well now folks, what's the next Challenge?"

Facing a journey of over 500 km. back to Cork, not to mention the trek back to the car, the lure of a celebratory pint of the black stuff for most took precedent over any future trekking decisions. So after a short discussion on a cold, cutting, windy day in the Hills, that decision was parked overnight. There was however, towards the end of the County High Points Challenge, a growing realisation amongst the group that the challenge on occasion had become a race to bag as many summits as possible on a given day. In many instances it did not allow much time to take in the views along the trek or from the summit itself and enjoy the sense of achievement. For some it simply became a box ticking exercise.

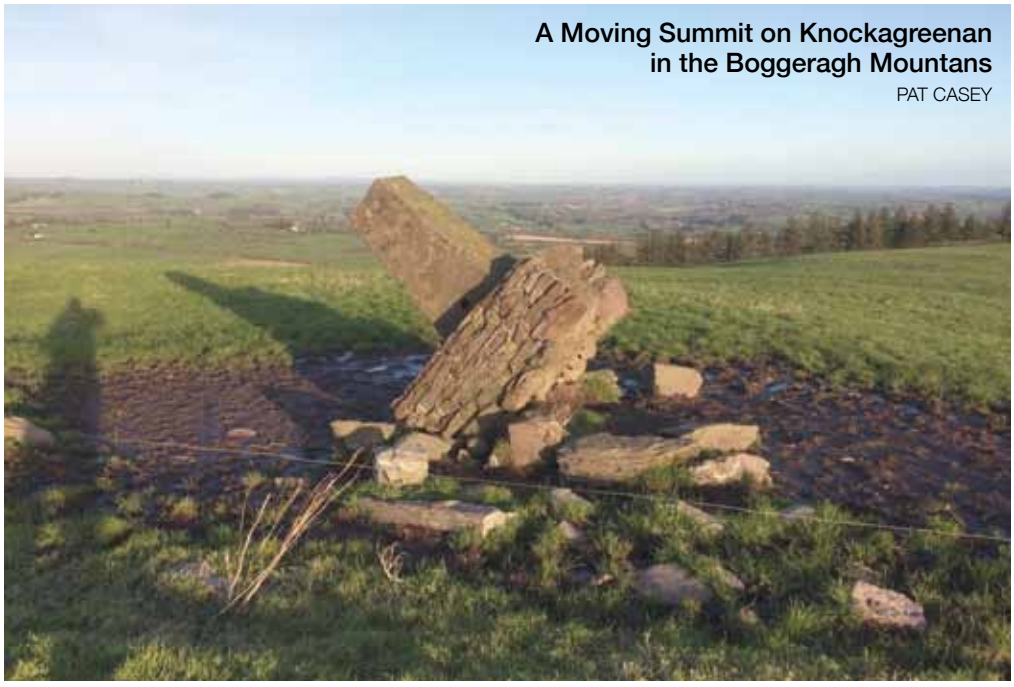
Ain't no mountain High Enough

On the long journey back South, suggestions for our next possible challenge ranged from the Seven Summits Challenge at one extreme, to climbing the more achievable inland County Low Points - possibly a challenge as yet not undertaken by anyone. As always after completing one challenge, there is a sometimes dangerous tendency to set more ambitious personal targets for the next challenge. Often that can be equated to more of an input of brawn than brain for the next challenge ahead - the sense that the

challenge just must be more difficult for all to achieve.

Our walking group consists of men and women ranging from early 30's to late 60's with varying levels of fitness and agility - to satisfy the needs of such a diverse group is a chal-lenge in itself. In our case it became quickly apparent from the wide ranging discussion of possibilities, that for the immediate future we should ideally look to stay closer to home. We also discovered in driving to/from and trekking across each County over the two year period to complete the challenge, it was the experiences shared during the trek on the day that was really the most enjoyable part. It was very much a case of staying in the moment, enjoying the journey and not concentrating solely on the destination, or the bagging of as many summits as possible on the day's outing.

To reach any possible consensus on the next challenge to be undertaken, the great asset and wealth of information that is the Mountain Views website, not for the first time proved to be our saviour. Armed with the range of logged members' experiences and information available on the website, such as suggestions re treks, parking, best routes to the summits, suggested grid coordinates for undertaking the challenges, etc., we finally decided on the Local 100 Summit Challenge. This challenge was based on the nearest 100 peaks to each individual walker's dwelling place. Comparing the summit list for each group member revealed that the list of summits for each person was different, although with many shared summits, as our group generally lived in various locations across Cork City and County. For the group, the decision to take on such an undertaking, turned future days on the hills away from the concept of a challenge, which by definition is a call for someone to participate in a competitive situation or a call to prove something. Each person's target and the sense of achievement on the treks would become singular as opposed to collective. It would not involve long car journeys or overnight stays and ideally would take us to mountain ranges and summits not too far from home and sometimes not too often climbed. Some of the listed climbs would have been logged as completed in the past by as few as 3 or 4 Mountain Views members - all the more reason to head to those areas to see what was possibly being missed.



A Moving Summit on Knockagreenan in the Boggeragh Mountans
PAT CASEY

In The Hall Of The Mountain King

In my own particular case the list of Local 100's included some of the finest climbing/trekking ranges in the country: the Ballyhoura, Boggeragh and Nagles Mountains to the north, the Comeragh, Galty and Knockmealdown Mountains to the north-east and the Derrynasagart and Shehy Mountains to the north-west. The heights ranged from the lowly Ballincollop Hill at 141 metres in South Cork to the much climbed Lyracappul in the Galtees at 825 metres - something there for all tastes.

Many of the summits were to take me to areas I had never before visited or even considered to be worth climbing. On occasion summits would be climbed that were not on an individual group member's list, but were climbed because they were on the lists of other members of the group. On other occasions members of the group found themselves climbing the same mountain more than once, because it was grouped with other selected summits to be climbed by the group of walkers assembled on the day. Initially, some wondered was it a waste of time for them to be climbing particular summits again, but over time invariably came to realise that the climb itself is very often more rewarding than reaching the summit itself.

The Local 100 Summits list is a great starting point for any walking group, with members of different abilities, age and ambition. The Challenge brought our group into areas, es-pecially amongst the Shehy Mountains in County Cork, that I never would have imagined visiting. It brought us into hidden and silent valleys, along abandoned Famine roads and farmsteads, to the base and tops of mountains that we felt time had forgotten. The climbs were undertaken in all weathers, snow, hailstone, rain, sleet, high winds, sun,

drought and calm. The challenge brought us over some well-worn and eroded pathways, but in most cases over open ground with no obvious route to the summit... There was a sense in being the first humans to trek across the ground. We also regrettably discovered a few cases where the trig pillars marking summit points had been removed by over eager farmers. The trig pillars were associated with the early 1800's and later 1900's surveys carried out by the Ordnance Survey to accurately map the entire island. The trig pillars are part of our industrial and engineering heritage and should be preserved for future generations. As they say 'Once they're gone, they're gone forever'. The range of summit heights allowed us to stay low on bad weather days and to aim for higher areas when the weather permitted. Consequently, across the two years, we never missed any planned trekking day. The reduced sense of the challenge gave us the space to take in the views, to appreciate the beauty of the valleys below us, to observe farm animals, farm layouts and farming practices and to meet local farmers and villagers. The people we met along the way were, almost without exception, helpful and encouraging, but above all else as we completed the challenge, it gave us a greater sense of place. The areas we visited became our back gardens and in time we came to realise and appreciate how everything in our area related to all others. While it took nearly two years to get around to all of the summits, it was time well spent and a really marvellous journey. Some summits would have been reached in less than an hour, but would often reveal stunningly beautiful views of the surrounding countryside, rivers, lakes and seashore. Other treks would have taken up to five hours to complete and on occasion the summit would be located in the middle of a wood with no resulting views. The Challenge was finally completed on Lyracappul summit in November 2018

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On the way to Musheramore in the Boggeraghs
PAT CASEY

View of Shehy More SW Top with Bantry Bay to the West
PAT CASEY

What's it all about, Alfie?

"So which trek is better to undertake for the body, mind and soul?"

Having trekked in mountain ranges across Britain and Ireland, Europe, Africa and the Himalayas over many years, I've realised that it is certainly not always about climbing the high peaks or persisting with the better known and well-worn treks. It is not about climbing the popular Lugs, the Benbauns, the Errigals or the Carrauntoohils ad infinitum, until we eventually destroy the unspoilt nature of the very terrain that attracted us to those areas in the first place. **It is time to look for alternatives, by adopting a more sustainable approach in our choices and begin reducing our carbon and especially 'Boot' footprint on many of the more popular routes.**

Having accomplished the task of completing the Local 100 list, I believe that the final outcome is less important than how you go about accomplishing it. It is better to be mindful of our actions as we walk along the path and simply stay in the moment. When it became important for us to keep our minds and bodies engaged, it allowed us more time for good conversation, a problem shared, debate and laughter - it's only then that the tea tastes better on the hills. Completing the challenge delivered a greater connection with nature, with time to identify and enjoy the flora and fauna accompanying us along the path. However, above all else it allowed us to enjoy the views laid out before us, appreciate the company of our fellow walkers and gain an enhanced sense of place.

Now the debate in our walking group has turned to the next adventure. Already we are hearing suggestions of a Local 100 Binnions List or perhaps a Local Trig Top list. ■

Blackstairs 2018
JIM HOLMES

Challenge walks in 2018

A well-tanned Jim Holmes reflects on a scorching year of challenge walking

2018 will be forever remembered as the year where all who were part of the Challenge Walks Calendar were scorched to a crisp, or definitely par-boiled at the very least, on many of their day's outings. Whilst the predominant weather on the first of the season's Walks were certainly no better or worse than their previous norms, these Walks would see plenty of biting cold and wild winds. The early Walks which include **The Knockmealdowns Crossing** and **The Maumturks Challenge** (sold out this year once again!) saw as well, enough good weather to ensure their days were memorable and successful once more. Even as late as **The Blackstairs Challenge** in May, there was still a bite to the air that could "split a flea"... but once the Summer months were finally entrenched, there would be very little relief even with a liberal helping of Factor 50 shlapped-on and massaged well in...

"...At the trig pillar on Greenane the temperature had climbed to 27 degrees and the descent to O' Loughlins castle was over completely dry ground rather the more usual sea of mud reminiscent of a World War 1 battlefield. The approach to Galtymore and Galtybeg brought momentary relief at times in the form of a cloud that teased us with shade; however a warm wind that came and went also gave the impression of hillwalking with a hairdryer blowing in your face..."

- Excerpt from the **The Galtee Challenge 2018**, John Fitzgerald.

And continue on the incredible weather sure did!!

"...We knew we were in for a scorcher! As the walk was officially started the 250 walkers started ascended Mount Brandon at varying paces in the very still air. Continuing on to Brandon Peak and Gearhane and the col at Mullach Beal, walkers were grateful for the energy bars and water awaiting us at the checkpoint. A steep climb up Ballysitteragh was followed by a descent towards the Conor Pass where more badly-needed water awaited us ..."

- Excerpt from **The Tom Crean Endurance Walk**, Ronan O'Connor.

It was disappointing to learn that 2018 would not see the very popular Mourne Seven Sevens take place. Reasons were both honest and understandable... resources on the ground. Very easily what can arise is the situation whereby there simply aren't enough members within a given Club to be able to host a given Challenge Walk.

Some solutions have been mooted over the years... perhaps a mobile flotilla of experienced stewards made up from different clubs was one very good suggestion that was muted during the year that was. Thankfully though, it was fantastic to hear how the Seven Sevens will return to the Calendar (under new management) next year. Limited to a mere 400 entrants...! It certainly shows that big events can be well run so long as the resources are there. But "reinventing" yourself has proven to work too and this was done on a whole "Club level" by **Na Sléibhte Hillwalking Club.** Well into their second successful year, the club changed the dynamic altogether by partaking in their own Challenge Walk each month. Members, who are required to be competent navigators, have now walked "Challenge Walk" type outings in all the Provinces and with strong turnouts from their growing membership.

A handful of years ago, so as to help introduce the World of Challenge Walks to the uninitiated, I put up a Challenge FAQ page on the website and on it I ran down a rough top 10 of difficulty:
https://mountainviews.ie/FAQ/challenge/

Not surprisingly, it sparked the usual heated debate

on which Walk the Challenge Walker can find him or her self at their most miserable...! But of course whilst light-hearted banter trafficked to and fro... all were in agreement as to how every Challenge Walk can either race up the "Charts" or face relegation in the rankings... totally depending on what the given Day throws. But at the end of this list (or at the very top - depending on your perspective) there's one incredible Event that slots into a realm all of its own... "The Triple" of **The Fei Sheehy Challenge**! The ask, is straight forward. Traverse The Comeraghs, The Knockmealdowns and the Galtees over three consecutive days. A lot has to fall into place, not least of all, conditions on the ground - be they your gear, your fitness, your reasoning ... let alone the weather! Yes, a lot has to run well on the Fei Sheehy, but God being good - each of the required Days will be Goldilocks... "just right". This year saw the highest "Triple" finishers! 31 incredible souls deserving of much more than the proverbial pat on the back!

The Fei Sheehy Challenge is a great example of the Challenge Walk reinvented. Other examples include the Mourne Seven Sevens that see a huge fraternity travel from across the pond in a fell-running capacity. Galtee Walking Club both host and help (invaluably) with more than one Challenge Walk on the Calendar. One Walk they host is **The Slievenamuck Marathon** which allows for the yearly continuation of a Walk by opening it up to runners as well. The figure of eight route is largely forest track, forming two loops, east and west of the Slievenamuck Ridge. Any day that gets the masses out of doors is surely to be welcomed ... and this is what the newest event to the Calendar, **The Highwayman Challenge** does with perfection even when the good weather was all but a memory. The last Event of the Challenge Walks Calendar would prove how inclement weather can never stand in the way of getting out, getting down and getting the freshest of air deep into the lungs! Granted that this Walk is at the "easier" end of the spectrum – everyone has to start somewhere.

"...So now, "Tell me this and tell me no more..." Can you remember back to when you were a young boy or girl and when you were out with your Mommy and saw a great big dirty puddle?? Well, what happened next?? Yeah, that's right - you took a running jump into it!! Way hey!!

Such was this year's Highwayman Challenge once again, as what seemed like a hundred brightly coloured wellies as worn by a gang-load of incredibly enthusiastic young children all tore off at a rate of knots on the "C" Walk. As all their high-vis colours dazzled off into the Wilds, there would not be a single utterance of complaint. No Way! This was pure, honest excitement to be out celebrating a Free-Range Hillwalk!! It was "Multi-Coloured Swap Shop" (Google it!) at the summit of Knockshanahullion where it must have felt like the top of the world to little legs..."

- Excerpt from the The Highwayman Challenge, Jim Holmes.

Challenge Walks are the perfect gateway to enjoy perhaps a part of the Irish Hillwalking world that one might not necessarily have previously considered, all under the umbrella and with the safety of a local Hillwalking Club. . . and they are a great man altogether too, for helping to avoid Access Issues - for example **The Burren Peaks Walking Festival** as organised by The Ballyvaughan Fanore Walking Club - takes you (with the help and permission from local landowners) to otherwise private lands and to enjoy one of the most incredible landscapes on this planet ... and not too bad for Ireland either!

So with dates on The Challenge Walks Calendar stretching from the Giant's Causeway to Brandon Ridge, from The Burren to The Wicklow Mountains... there is absolutely something for the beginner and the mountain goat alike. And what Challenge Walks article would be complete without its required rant ...! If you are one of the spoken of mountain goats who whizz by when many of us are in cardiac arrest – don't forget to smell the roses! There is a tendency to fall into the trap of bailing around like a blue arsed fly on many a Challenge Walk- thereby missing the opportunity to smell all these roses (or at least the gorse) and never notice how the light dances on quartzite ridges or the gusts of wind whip up spectres on the corries.
https://mountainviews.ie/challengecalendar/

Onwards and upwards Boys and Girls, keep Safe and enjoy your day. - Jim Holmes ■

Maumturks 2018
JIM HOLMES

Our tent pitched above Lake Bierikjávvre
PURPLE PEAK ADVENTURES

Into the wild

A Trek through Sarek, Europe's Last Great Wilderness by Sharron Schwartz and Martin Critchley, the MVs duo who make up Purple Peak Adventures

I can feel the power of the roaring river racing just metres below my feet via the vibrations coursing up through the bridge I'm standing on. Only a few days ago this aqua-hued water melted from snowfields and ancient glaciers, making its way into this, the Sjnjuvjudisjåhkå River, a throbbing, thumping artery that flows through the heart of Laponia, a 9,400km^2 region lying above the Arctic Circle in Sweden.

Embracing nine protected areas including four national parks (Padjelanta, Stora Sjöfallet, Muddus, and Sarek), and declared a World Heritage Site in 1996, Laponia is a vast refuge for wildlife. Home to the Sámi, Europe's only recognised indigenous people also known as Laplanders, who have roamed the northern latitudes of Norway, Sweden, Finland, and Russia's Kola Peninsula for millennia, it's also of cultural significance as the largest area in the world (and one of the last) with an ancestral way of life based on the seasonal movement of semi-domesticated reindeer, which has characterised Sámi life for thousands of years.

Laponia's jewel in the crown is Sarek National Park, established in 1909 and covering 1,977km^2. This circular expanse of genuine wilderness, Europe's last, is an inaccessible region of 2,000 metre-high mountains, many still holding glaciers, with no roads, waymarked trails, or wardened huts. The nearest access points are a day away from any trail head, and Sarek provides sanctuary for numerous animal species, many endangered, including moose, brown bear, wolverine, Eurasian lynx, grey wolf, and Arctic fox. The landscape feels decidedly primordial, perhaps because the last remnants of the vast Fennoscandian Ice Sheet only receded from the mountains of eastern Sarek some 9,000 years ago, just after the end of the Pleistocene epoch.

Sarek is an unmissable opportunity for tech-frazzled souls to hit the reset button

Trekking Sarek is an unmissable opportunity for tech-frazzled souls to hit the reset button. For this is a place where the extraneous white noise of life – the ceaseless cacophony of banal urbanity - is filtered out. Replacing this is the great symphony of nature - the faint buzz of an insect's wing, the light whoosh of feathers, the wind whispering through grass, the roar of a glacial river – which bestows a restorative inner calm. But it's a serious undertaking and you need to be experienced and properly equipped.

The Sjnjuvjudisjåhkå marks the western boundary of Stora Sjöfallet National Park which we have traversed via the Padjelantaleden, a 140km trail running from Kvikkjokk, north to Ritsem. Here we left our vehicle to catch a boat for the 40 minute crossing of Lake Áhkkájávrre to the Sámi settlement of Änonjálmme to begin a roughly 100km week-long trek through Sarek to Saltoluokta. It's early September, the height of the short Arctic autumn, a season of silvery mists and mellow fungal fruitfulness, and the best time of the year to trek here as the mosquitos have gone.

Reindeer are a common sight in Sarek National Park, and have been herded by the Sámi for millennia
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From Änonjálmme, the Padjelantaleden traverses mountain birch forest where the air is rich with the fragrance of decaying leaves. It's damp too. It rained heavily earlier in the week and the soil remains moist, slowly releasing its heady vapours. Beneath the tree canopy the mossy ground is peppered with scarlet lingonberries, purple bilberries and shaggy lichens. The birch forest has an enchanted, fairy-tale aura. The whispering leaves glow golden as the light passes through them, shivering on their silver branches as they are enveloped by autumn's breath of death. Along the trail we are showered with a saffron-yellow confetti of leaves making their final pirouettes to Mother Earth, her loamy winter welcome mat fecund with fungi.

Across the bridge we leave the Padjelantaleden and pass into Sarek National Park, following the Sjnjuvjudisjåhkå upstream in a south-easterly direction. We've walked around 15km and above the river find an elevated clearing in the trees carpeted in pillow-soft moss to make camp. To keep the weight in our rucksacks down (I'm carrying around 17 kilos, and Martin over 20, plus another 5 kilos of camera equipment between us), we're using a flat-pack titanium Honey stove. This burns twigs to boil water to hydrate our freeze-dried meals, allowing us to carry just one large canister of gas for the week. As night falls and the stove goes out, the cold hits us like a sledgehammer, sending us shivering into the warmth of our four-season sleeping bags.

As night falls, the cold hits us like a sledgehammer

I'm woken by a Siberian jay chattering noisily in a nearby tree. Golden shafts of dawn light streaming across a ground glistening with frost greet us as we open the tent flaps. This has melted by the time we break camp, following a narrow trail through crowberry scrub worn clean by reindeer hooves. Traversing highlands and lowlands, through willowy wetlands, and leading to the best points for fording rivers, some of these reindeer highways are now used by trekkers. They make the going easier, although they have a tendency to peter out without warning. We soon become adept at scanning the tundra to pick up even the faintest trail.

We climb gently up-valley, crossing small streams and through patches of brackish bog and thickets of straggly dwarf willow which are tiresome to traverse. At Kisuriskåtan we encounter an old Sámi *goathi*, a conical shelter constructed of wooden posts covered with birch bark, atop

which layers of turf are laid. This one is dilapidated and virtually invisible against the landscape until we're almost on top of it, but still provides trekkers a welcome refuge from the steady downpour of a summer storm or the biting cold of a snow-bearing Arctic wind.

We now cross boggy terrain towards the point where the Sjnjuvjudisjåhkå River bifurcates, following the branch flowing to the west of the pyramid-shaped Niják Mountain. After walking nearly 17km, we find a camping spot just off the trail with a stream of cellophane-clear water nearby and a face-slapping view of the glacier-encrusted Áhkká massif. Dusk falls softly in a pall of pink and charcoal-grey cloud churning above the mountaintops which slowly spreads across the sky, blotting out the watery stars.

I awake to the plaintive cry of a Golden plover. Thin white cloud is spreading from the west and mist is forming atop the peaks of Áhkká. By the time we break camp, it has blanketed almost the entire sky, reducing the sun to a wan disc. Our route today traverses the bleak and treeless Ruohtesvagge Valley, initially skirting the western shore of a small lake named Ruohtesjávrásj, a spoonful of gloomy, mercury-grey water lying below the Niják Massif.

We soon spot the interlacing network of channels forming the Smájllájåhkå, one of the main rivers running roughly southeast into the heart of Sarek. It drains the meltwaters of the Ruohtesjiegna glaciers and we have to cross it to proceed down the valley. We approach it where it has braided into three channels, one of which we have to wade. The fast-flowing chalky-grey water emits a menacing rumble as invisible cobbles are turned deep in its bed. With my boots tied together round my neck, trousers rolled above my knees, and wearing Crocs, I tentatively step into the soft grey mud on the shoreline and howl like a wild thing as the ice-cold water slaps hard against my shins.

Once across, we follow inconstant reindeer trails which we keep losing as we traverse boulder fields, moraine, sandurs, and bog. There are numerous streams and rivers to cross, but we keep our feet dry. By late afternoon the western sky behind us has become a giant, angry bruise which swallows the sun. The air is pregnant with rain, and as we have covered about 15kms, we set up camp almost opposite the enormous Mihkátjåhkkå glacier, part of the Sarek Massif.

The western sky behind us has become a giant, angry bruise

We have just erected our tent when the heavens open. The shower is intense but short. As the sinking sun emerges from beneath a line of angry grey cloud on the western horizon, a shimmering, iridescent rainbow arches over a serrated rocky ridge leading down from a nearby mountain peak. As the rain passes, the rainbow fades away and the

The sinking sun sets the mountaintop aflame with intense vermillion light

sinking sun sets the mountaintop aflame with intense vermillion light, a sharp line of demarcation separating it from the chalky-grey area beneath. Then, as the fire creeps slowly downward, the flames subside, the burning peak dims, and the mountain is plunged into shadowy monochrome. Before we turn in, the sky clears and the Northern Lights billow across the sky like silk streamers from the direction of The Plough.

The morning sunshine blinds us as we walk towards the Mikkastugan shelter at Skárjá, the very heart of Sarek. From here, in any direction, it is three days on foot to reach a road. The only emergency telephone in the park is housed inside the shelter, and just beyond it is a 'summer bridge' (*sommarbro*), installed each year at midsummer and removed by mid-September. This spans the Smájllájåhkå which roars like a wounded beast as it is squeezed between the walls of a small canyon, descending through it in a series of seething, foaming waterfalls. The naked rock, worn to a marble smoothness, has a forget-me-knot hue and its scalloped patterns were among the phenomena that made a deep impression on Swedish geographer and geologist, Axel Hamberg, who conducted some of the first surveys of Sarek National Park.

We leave Ruohtesvagge at the confluence with the Guohperjåhkå River, where the Smájllájåhkå becomes the Ráhpajåhkå, fed by ice melt from the mighty glaciers of Sarektjåkkå. Below us is a fairy-tale scoop of olive willow, russet bog, and the tangled turquoise strands of the head waters of the Rapa River which flows southeast through the famous Rapadalen Valley. The alpine tundra is aflame with the crimson, vermillion and amber of nature's autumnal fire which sweeps up to the feet of ice-crowned giants. The silence is soothing and so profound, I can hear the beating wings of a Golden eagle as it flies overhead.

Our route now entails crossing two rivers: the Mahtujågåsj and the Tjågnårisjågåsj. The water level at Mahtujågås is low enough for us to hop across the tops of boulders. Tjågnårisjågåsj is more challenging. Flowing down over a series of waterfalls from a hidden glacier, the channel is wider and the water is fast-flowing. My Pacer Poles come in handy as I inch my way through the racing knee-deep water round eggshell-smooth rocks slick with algae.

Ravishing views now open towards Låddebákte Mountain, a huge grey sentinel guarding the head of Rapadalen, causing me to pause for a moment to savour my surroundings. At my feet is a tiny stream trickling downhill to

An old Sámi *goathi* now provides some shelter for trekkers
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The wild heart of Sarek National Park blazes with autumnal colour
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join the Rapa. Instinctively dipping my cupped hands into it, I raise them and slake my thirst. Nearby, a bull reindeer with a magnificent set of antlers, the points sharp as javelins, is stripping the leaves from a straggly willow tree. I give thanks for the peace of wild things.

Passing above the Bielajávrátja Lakes set like turquoise jewels amid the golden swathes of autumnal vegetation, the reindeer trails become increasingly inconstant, and it's time consuming and tedious crossing boulder fields, small streams, and swathes of bog above Lake Bierikjávvre. After 14km we climb high above its shoreline, making camp near a crystal-clear stream where we enjoy grandstand views over the lake bathed in the glorious soft light of early evening, which amplifies the colour of its turquoise water, lending it a Mediterranean feel.

At dawn, an iridescent silver mist shrouds the valley bottom obscuring the lake, above which the icy mountaintops dazzle like jewels. Far aloft in the heavens billow the rose-pink streamers of dawn. It's going to be a scorcher. By the time we break camp, the sky is a brilliant baby-blue and the air is so clear that each distant peak seems close enough to touch. We make rapid progress across the gravel outwash plain below the Sarvatjåhkkå glaciers, heading for a col between the twin peaks of Vuojnesvárasj and Vuojnesskájdde, avoiding the boggy ground near Lake Vuojnesluobbala.

An iridescent silver mist shrouds the valley bottom

At the col we climb to the summit of Vuojnesskájdde and stare in awe at the 360 degree face-slapping scenery of a watery world shaped by the relentless work of ice. Looking back up the valley, we can see for kilometres beyond the intricately woven turquoise braids of the Bierikjåhkå River and the nearby glaciated peaks, to the mountains we had walked below yesterday morning at the very heart of Sarek. Ahead of us a new panorama unfolds: yet more topaz lakes, behind which soars a solitary mountain - Sluggá (1,279m) – Mount Errigal's Swedish doppelgänger!

Descending a small gully, we head towards the metal suspension bridge over the Guhkesvakkjåhkå River. Before we reach it, we encounter a tributary of the Vuojnesjågåsj which we must wade. The chalky, racing river is carrying meltwater from a glacier on Spijkka which fills the field of view to the northwest. Before long we hear the bellow of

One of many ice-cold river crossings
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A panoramic view over the central peaks of Sarek National Park
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the Guhkesvakkjåhkå, a large river marking the boundary between Sarek and Stora Sjöfallets National Parks. After crossing it we follow a trail that threads its way across the boulder-strewn, occasionally wet and willowy ground above Lake Ljehtjitjávrre. After walking 14km, we make camp on a grassy bank of the Lulep Niendojågåsj. We relax in our open tent sipping brännvin as the nearby mountaintops blush rose-pink in the settling sun, and as the sky darkens, the Milky Way arches overhead and the shimmering tendrils of the Aurora Borealis stream across the sky from the north.

Breaking camp, we wade the ice-cold Lulep Niendojågåsj and head northeast towards Sluggá, avoiding the lower terrain tinged with the tell-tale olive green of willow. Eventually we have to descend in order to head southeast, and instantly encounter a squelching, stinking mass of boot-sucking bog entangled with straggly head-high willow that clutches maniacally at our legs and packs. In this verdant prison, the air is thick and fetid, and rocks hidden amid the dense vegetation lie in wait to trap a weary ankle.

The monotony of the landscape is lifted by bog cotton, incandescent as candle flame in the glassy sunlight

After crossing the Sluggájåhkå River we hope the terrain will improve, but we then encounter an enormous boulder field with car-sized blocks of rock deposited eons ago by a receding glacier. It's mentally and physically exhausting clambering over and round these, and it's a relief to pass out of it onto trackless boggy ground. The monotony of the landscape is lifted by bog cotton, incandescent as candle flame in the glassy sunlight, and herds of reindeer dancing across the tundra ahead of us. It's only after climbing several hundred metres higher that we meet benign mats of dwarf birch and crowberry as we head towards a col harbouring a group of tiny lakes. After walking 14km, we find a flat camping spot near a small stream in the lee of the high ground, offering jaw-dropping views down over Lake Pietsaure. The setting sun turns the churning clouds candy-pink, and as the light fades, the lake is plunged into mysterious obsidian darkness.

There's little light pollution in the Swedish Arctic and the night skies are amazing
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We wake to a cold, watery dawn. There's a hint of winter in the air as we break camp to begin today's 14km stretch across trackless rough ground towards a small gully that will take us down to Lake Pietsaure. Every so often we have to ascend or descend banks of moraine, battle through thickets of waist-high willow, and dodge deep patches of sly bog. From the top of the gully, a vista fit to grace the pages of *National Geographic* unfolds before our eyes. The flame-red vermillion and cinnabar of the alpine tundra gives way to the rich saffron-yellow of the mountain birch forest. A band of shingle lines the shore of the ribbon lake which emits a silver sheen in the feeble sunlight. The beach is bisected by a narrow channel where the Avtsusjjåhkå River flows into it. To the left of the river, the roofs of a Sámi settlement are dwarfed by the fortress-like steel-grey walls of Lulep Gierkav Mountain.

A vista fit to grace the pages of National Geographic unfolds before our eyes

At the bottom of the boulder-choked gully, we pick up a trail leading towards the lake. After crossing two rivers that tumble down over a series of waterfalls from the high ground we have just traversed, one of which we wade, we reach a group of reindeer fences above the beach. It's not obvious where we should go from here, and we cross the shingly shore towards the settlement and the channel where the river flows into the lake. Nowadays, the Sámi come here mainly in the summer to mark their reindeer calves and the settlement is deserted. A boat on a rope is sometimes placed here in the high season, but we're too late and the boat is gone. The channel is only a few metres wide, but unfortunately far too deep and fast flowing to wade.

We now waste time walking upriver looking for a safe place to cross. The terrain turns spiteful, choked with vile vegetation including willow and ankle-deep bog, and the sky has darkened to an ominous battleship-grey to match my mood. Finally, we find a braided section with sand banks, and channels between them shallow enough to wade. We then experience one last almighty battle with the wretched willow before stumbling onto a muddy 4x4 track leading away from the settlement.

We follow this uphill for a few hundred metres before joining a steep rocky trail leading to the saddle between Lulep Gierkav and Tjeburisvarasj. Spread before us is a Brothers Grimm landscape of gilt-leaved birch forest and indigo-blue lakes, where kaleidoscopic patterns are being traced by huge lances of light falling from gaps in the slowly churning cloud just touching the mountaintops. We head towards the Saltoluokta Fjällstation, now visible above the shoreline of the lake, where we will overnight before catching a bus back to Ritsem. The stony track drops steeply into the fairy-tale forest where the mossy floor is carpeted with millions of jewel-like fruits: bearberries, bilberries, lingonberries and bunchberries. Fungi blooms everywhere – creamy puffballs, scarlet fly agaric, leathery cep mushrooms the size of saucers, and, on the bark of dead trees, countless species of shelf fungi.

Spread below us is a Brothers Grimm landscape of gilt-leaved birch forest and indigo-blue lakes

The view down to Lake Pietsaure
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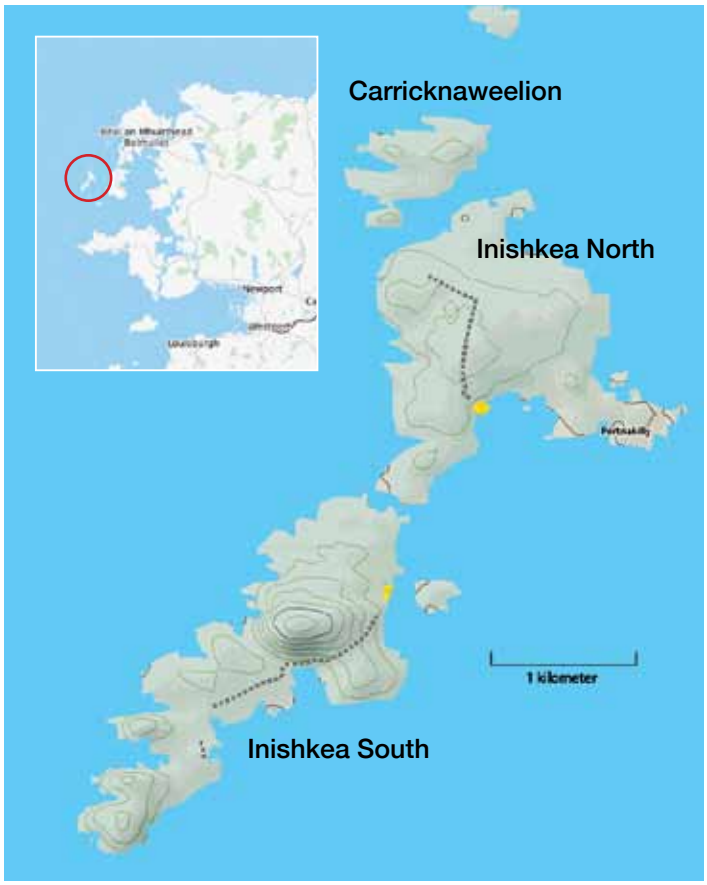
Not long after we hit the Kungsleden, Sweden's most famous long distance trail, I catch the faint whiff of wood smoke heralding our imminent return to civilisation. I'm emotionally conflicted, for the completion of any trek is always greeted with a mixture of elation tinged with regret. We arrive at the Saltoluokta Fjällstation to be welcomed by a magnificent rainbow etched in pin-sharp detail against a steel-grey sky. It's a magical end to a heavenly trek across Europe's last great wilderness. Reenergised and restored, we are now satiated. Well almost. The much-anticipated *Tjers Bryggeri* stout is absolute heaven too! ■

The Inishkeas. Mayo's forgotten islands

Damian McDonagh visits this neglected archipelago off the north-west coast of Mayo



Firstly, I must thank Castlebar-based tour guide Barry Murphy of Tourism Pure Walking Holidays for organising an amazing visit to the deserted island paradise that is Inishkea North Island. The County Mayo coastline houses a small archipelago of deserted islands that truly capture the ultimate off-the-beaten-track walking experience here on the western seaboard. Additionally, Jed Geraghty of Geraghty Charters runs trips sporadically throughout the summer. If you are contacting him, make sure it's the much lesser-visited North Island he will be visiting and remember there is no landing pier. We visited on 23 June and this was during the heatwave Ireland experienced last summer during 2018. The seas were flat calm and it with hot enough temperatures it allowed us to go for a dip in the sea after the walk.

The original settlers encamped on Inishkea North Island about 4500-years-ago and there are many visible prehistoric sites scattered throughout the island, including the enormous "Baily mound", visible from any point throughout the island. The early Christian monks arrived sometime around the 6th century and this particular island contains some of the best-preserved cross slabs and other monastic sites and settlements from this period.

The Vikings are said to have landed in the 10th century and the Pirate Queen, Grace O' Malley, ruled the western

South Inishkea Island
AIDAN CLARKE

seaboard with an iron fist during the 1500s and frequently used Inishkea North Island as a base to launch attacks. Perhaps with such a tumultuous history, it wasn't until the island was resettled in the 17th century and hosted a small but thriving community. This community lived on the island until it was finally deserted in the 1930s, primarily due to a declining population.

The island is slowly being reclaimed by the sands of time yet still hosts an array of wildlife from the Corncrake to the multitudes of offshore seals and dolphins.

The walk starts right at the beach in which you will see the series of deserted houses perched upon the bluff. Ideally, you can start walking in a clockwise direction which will take you all the way over to the channel of water that separates both Inishkea North and Inishkea South islands. The scenery looking back over to Achill Island and Croaghaun is nothing short of surreal. It's simply a jaw-dropping feast of amazing scenery. From here just basically hug the coastline. This will take you right around the circumference of this alluring island but it's simply imperative you allow time to explore the wonderfully preserved early monastic sites scattered throughout the island including the small cemetery the monks used to house their dead. ■

Early Christian cross-slabs
DAMIAN MCDONAGH

Col at head of Cloon Horseshoe
TONY DOHERTY

An accidental hill walker

Tony Doherty reflects on the fickle fingers of fate that have led to a life-long love of the hills and mountains

Tony regularly contributes on hillwalking to the Irish Times. Meeting a newspaper's audience expectations for clarity and feasibility have clearly frustrated Tony from mentioning the much more vivid experiences he now shares. So, spoiler alert: boy meets mystery partner, coast-reached mountain lists, drunken port officials, falling sheep and even a nod to MV.

Many people climb a mountain because they admire it and head for the summit. Others head for the summit because a friend persuades them

From Snogs to Slogs to Sloops

I first ventured on to a mountain while on an Irish Course in the West Kerry Gaeltacht when I was 16. As many others have found out before and since, what ever about learning Irish, it was the first chance for a snog. The area was still heavily populated at the time and after a visit to Brandon Creek, it struck me that the lower slopes of Masatiompan, 763m, would give both the required privacy and, more importantly, time. My desired partner was persuaded to climb to a secluded hollow.

For the rest of the holiday it never occurred to me to explore the tops. I have tried in vain to remember if I admired the mountains; I know it certainly never struck me to climb them.

After college I went to London to teach. My Head of Department, Paul Kelly, was a keen mountaineer and used bring the sixth formers on mini-expeditions to The British Mountain Ranges. As the junior member I had no choice but to go along as an assistant and I was not gruntled; the flesh pots of "Sixties" London being a far more attractive weekend proposition. The first route on the schedule was "The Crib Goch Ridge", the arête that leads to Snowdon from the north. I was terrified. My lowly status meant my terror received no pity and I was duly dragooned into being a regular on these trips. My love of the mountains grew and by the time I got back to Ireland I was a convert.

An Accidental Terrorist

The three months of the summer holidays were devoted to sailing around the coast in my 8m Sloop, "Bali Hi" taking a ramble up any mountain near an anchorage. I had read about and admired Bill Tilman, who believed that as mountains are measured from Sea Level, you haven't really climbed one unless you start on the shore. One year we followed Tilman's classic route, sailing to and climbing from sea level the highest mountain in Wales, England, Scotland and Ireland. It has now become a race with commando types running up the mountains. They don't include Ireland; the long and rough sail down our western seaboard would be too much for the poor dears. Our trip involved 1,616Km of sailing, 212Km of walking and 4,900m of ascent. And all from a 8m, 30 year old yacht. You don't have to be a millionaire to undertake these adventures. We all agreed that it was one of the best holidays of our lives despite being nearly arrested under "The Prevention of Terrorism Act." What happened was we got the Welsh Customs Officer drunk as a lord on our duty free. He staggered off the boat at three in the morning and we headed for Snowdon (we hadn't been drinking). Next day we headed north for Ravenglass, the port for Scaffell Pike. There was a squad car waiting for us on the pier. The customs man had left all his official seals and stamps on a shelf and we hadn't noticed them. This was the height of "The Troubles" and a bunch of Paddys heading out into the Irish Sea with a valuable collection of seals and stamps etc, on board had caused not a little consternation. Guns were pointing at us as we tied up. Eventually all was explained, and we received a formal warning not to get any more of Her Majesty's Revenue men pissed.

A boat isn't essential to be a "Tilmaneer". He just happened to live on a boat. "Sea to Summit" has become popular in recent years. I do the ones where there is as Short a walk-in as possible. Hungry Hill, Knocknadobar, Cruach Mhairtain from Clogher Beach, The Blasket Ridge, The Brandon Ridge from Brandon Creek to Dingle Harbour, Tully Mountain, Mweelrea, Cliff walk from Port to Maghera, Slieve Donard. Curiously, I've just realised, these are a large extract from my list of favourite mountains. Like Sheldon in "The Big Bang Theory", I also have a favourite 'Spot'; this is the rock outcrop of "Binn an Choma" on the south west spur of Mt. Eagle, to where I will retreat if I ever get a diagnosis of a terminal illness, I shall come, and watching the sun set over the Blaskets. I shall make a plan.

Glenlough Valley. Caha Mountains. SW of Glengarriff
TONY DOHERTY

What happens on a Hill Walking Trip stays on a Hill Walking Trip

One of the great pleasures mountaineering has brought me is founding the Colaiste an Spioraid Mountaineering Club in May 1972 and which is still extant. Kieran O'Mahony and I, who founded the club were typical "Sixties" iconoclasts who never joined anything. So, we are not well known in MC circles That anarchic spirit infected the club and we attracted, the loners, the dysfunctional, the misfits, and the well-adjusted. It used really annoy the P.E. teachers that we would have guys out doing vigorous training who would never join in PE classes.

The most intense training was for the popular Expedition to Wales where we would climb all 16 of the Welsh 3,000's in three days.

Being serious for a moment, the camaraderie of the club did have an extremely beneficial effect on kids going

The late Jack Walsh (left) receiving us after we arrived down from the last peak on Four Peaks Cruise

through difficult periods in their adolescence. They felt safe with us; the club motto being "What happens on the Trip stays on the Trip". We had our own disciplinary code.

Accidental Crises

If you are running a school club you try and anticipate every possible mishap but here was one that caught us on the hop. We were climbing Mt Brandon from Faha. I was higher up the slope when something white caught my eye. A sheep, who had been bumped off a ledge by another, was tumbling down the slope towards a cliff under which some of the group were walking. They couldn't see him. I froze; thinking "this is it, a certain fatality" Miraculously it fell between two of the lads. We were all in shock. So black humour was the only way out and so we planned the Requiem Mass for the two who could have been killed. The Hymns were obvious, "The Lord is My Shepard" and "Sheep may Safely Graze." "Loving Shepard of Thy Sheep" The eulogies were scurrilous and have no place in this narrative. [ED: ah, go on – more seriously someone was badly injured in the Mournes this year by a falling sheep.]

The only accident we had was on the southern slopes of Crohane when a student's knee popped out. This was beyond our capabilities of dealing with on our own, so we called The Kerry Mountain Rescue. They arrived quickly. The first guy to reach us greeted us with "Well ye'd have to be Cork F****rs, coming down here on a day when Kerry are playing in The All-Ireland". At least he complimented us on our gear. We had a tent over the victim, and a Camping Gaz to keep him warm and make a cup of tea. His final words after the evacuation were, "F*** Off to the Comeraghs the next time we're in the All Ireland".

An Accidental Mountain Journalist

The next accident in my mountaineering career was running into a friend of mine on the Galtees, who was walking with Sean McConnel (RIP) a journalist from The Irish Times. After listening to my ould waffle all day, he said I might be useful member of the team who had just started the "Walk Column" in The Weekend Magazine. Much to my surprise I am still at it ten years later. I've often thought of giving up, that I'm running out of mountains. Then I do my research and find places I had never thought of going to. I have stumbled upon some wonderful places; one in particular, so special that I couldn't write about it as its eco-system was so beautiful and fragile. I have rarely received a compliment from a Hill Walker; they would die rather than admit that they read guides. But many non-hillwalkers follow the series. One house-bound old lady wrote me that she had bought all the OS Maps and followed the routes. I BCC her the photo selection I send in.

An accidental Queer Mountaineer

In 1993 "The Cork Gay Community Project" opened in "The Other Place" in South Main Street. I joined as a volunteer worker with a brief to get social activities going. (Bet you assumed it was a girl I brought up Masatiompan -□-). Hill Walking was the obvious first choice and thus, The Cork Gay Hill Walkers was formed. We took great delight if we met another club on the hills and they asked us what club we were.

Cork Gay Hillwalkers celebrating the opening of Cork Pride Week on the Summit of Carrauntoohil
TONY DOHERTY

The answer caused a plethora of reactions as you can imagine back in those dark days. On a day of torrential rain on the Glenbeigh Mountains we took to the emergency shelter for our lunch. There were a small group nearby and we invited them in. It turned out they were from a Rugby Club in Limerick. When they got their answer as to what club we were they couldn't get out fast enough.

Cork being a small place, word gets around and CSNMC were on to it.

The most startling question was, "And would they be able to climb, Sir?" I never let him forget that. He became Club Captain in Sixth Year and on Awards Day (The Mountaineers would get a Certificate stating the total ascent in their six years. Quite a few would get the highly prized 100,000 feet Certificate). Now I got my revenge. I called the Club Captain up on stage, presented him with an old pair of gaiters that I had painted pink, and congratulated him on being elected an honorary member of The Cork Gay Hill Walkers. Uproar in the hall. I've never seen anyone blush so deeply.

An Accidental Mountain Viewer

I had never heard of Mountain Views, until one day as I was preparing to climb Shehy More, 546m in the Shehy/Knockboys, a car pulled up and a few walkers got out and headed up the mountain at a rapid pace. Their driver told me they were knocking off the "Arderins". I mentioned it in my article and said as an addictive personality, I would be afraid to start on a project like that. I also noted that the mountain had been given the wrong name on the list on the Mountain Views Website. Wrath descended on me in the Internet Postings. I was making a joke at my self in the first part and I was right in the second part.

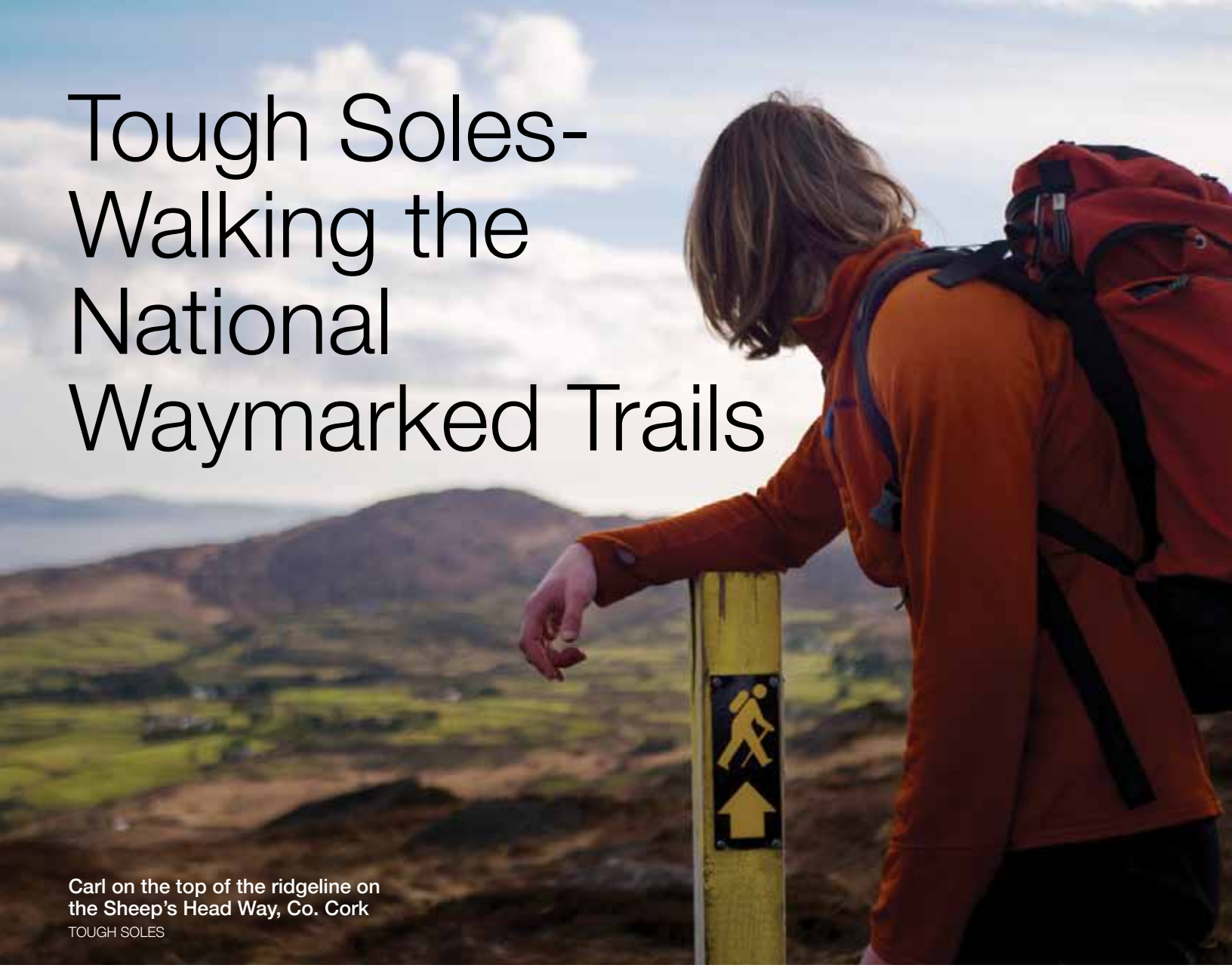
When that was sorted out, Simon [Stewart, the MountainViews publisher] put my name on the list for the newsletters, which I greatly appreciate. I admire the conciseness of the accounts. (There is a series of Hardback guides that I've come across that are so over written my mind just goes blank if I try to read them). I have a high regard for the elegance of the descriptiveness in many of them. Where MV is invaluable to me as I scan the opening lines of a report, is information on access and parking. If I see the word fences, it goes off my list. Writing for a public newspaper, I cannot invite readers to cross fences and through fields of cattle. The stricture,"cross fences with care" is a con I can't get away with.

I would imagine Mountain Views have brought many to the mountains. I have been lucky to meet people who have brought me to the mountains and the sea. And I have tried to bring that philosophy into my life. It is what we have passed on that matters in the end; to quote Hector in the "History Boys": *"Pass the parcel boys. That is all we can do; touch it, feel it; hold it; pass it on. Pass the Parcel Boys"*

Mountain Views does that in Spades. ■

Ballynakill Bay and Twelve Bens from Tully Mountain, Rynvyle Peninsula Connemara
TONY DOHERTY

Tough Soles- Walking the National Waymarked Trails



Carl on the top of the ridgeline on the Sheep's Head Way, Co. Cork
TOUGH SOLES

Tough Soles are Ellie Berry and Carl Lange, and they have an ambitious plan: to become the first people to walk every National Waymarked Trail in Ireland

Carl and I are walking all the National Waymarked Trails of Ireland. Currently standing at 42 trails and around 4,000km, this project started April 2017. Since then we've walked 35 trails, and over 3,000km.

In 2015 we (like many people) went and walked a variation of the Camino de Santiago in Spain - 1,100km over a six week period. It was a really great experience, and we met some amazing people along the way. One of the most common reactions people had when they found out we were Irish was to tell us how much they loved our country - maybe a family member had visited "just for a weekend" and were still living there 10 years later; or it was somewhere they had been dreaming of visiting since they were a child. Whatever the specific story was, we heard enough variations to realise how little of this emerald island we had explored ourselves.

Currently standing at 42 trails and around 4,000km

Flash forward to January 2017. We're sitting in a cafe thinking about what adventures we wanted to do over the coming year, and Carl remembers a list of trails he'd previously come across. The National Waymarked Trails. We had walked over a thousand kilometres in one go before, why not try and walk 3,500-4,000km? Our original estimating and planning was all done that January afternoon: based on our previous experiences it would take 6-8 months, walking a minimum of 25km a day, at least 5 days a week. Clearly it hasn't been all that simple, as we're still working on the project 18 months later!

When we started the project we quit our jobs, and handed back our apartment keys. We had our first trail

loosely planned, and that was pretty much it. Because we walked straight out of our lives and onto the trails we carried extra weight for our first week, until we could leave those random things somewhere safe. This was the biggest thing we'd ever undertaken, and part of our planning was to actually not plan too much at all. There comes a point after deciding to go and do something big, that we find it safer to not overthink it and scare ourselves! For the minimal planning we do, most of our information comes from irishtrails.ie. For each trail they provide free maps, total distance, start and end points, as well as a brief overview as to what the trail will be like. It's not always correct, but it's right most of the time, and is often the only free source of information. The majority of the trails also have information boards at different access points, which sometimes have extra information on them such as elevation or alternative bad weather routes. The worst situation is when the online information contradicts with what the onsite information boards say - there's never a way of knowing which one is going to come out right! This has only reinforced our "lack" of planning: it's hard to set definite dates when you're never 100% sure of the facts. And so we just use every resource available to us, combining them as best as we can (google maps is great for finding cafes and accommodation). As anyone reading this will know, for such a small country the landscape changes drastically and dramatically from one area to the next, and so does the weather. We often found ourselves changing our minds on what trail to do next based off the weather forecast - we might as well walk in Donegal if it's raining in in the east! However, neither of us drive so we have been completely reliant on public transport, friends and family - and the occasional lovely stranger. This has definitely made the trip harder in ways that we just didn't account for, and because of that we lost a lot of time (and money) just trying to get from one place to the next. It does surprise people to hear that we take public transport as they assume a walking project means just walking. However nearly each trail is separate, so we have to take whatever transport we can find in between them. It's a 4,000km project just walking the trails themselves, not including any walking or transport we do in between! Unsurprisingly, drivers licences are high on our lists of things to get once we finish. One of the other questions we get asked frequently is why we aren't walking in Northern Ireland: it just happens the set of trails we're doing are specific to the Republic of Ireland. There are some really

This was the biggest thing we'd ever undertaken

Ellie on the climb of Glengesh Pass, Co. Donegal
TOUGH SOLES

gorgeous trails in Northern Ireland that we're hoping to include if we have enough time/money/stamina.

I think that while there is a long established hiking and hillwalking community in Ireland, it has been relatively small group of people for quite some time. There are amazing people working on developing the walking trails here, but with limited funding for trail creation and maintenance there's usually nothing left for marketing. I think this, coupled with how extensive private land is in Ireland (and a lack of rights to roam), has made it hard for the establishment of long distance, off road trails that get the number of walkers they deserve (and need to justify continued maintenance). The numbers of hikers on the National Waymarked Trails varies wildly - the famous five (Kerry, Dingle, Wicklow, Western and Beara Ways) have probably thousands of people walk all or sections of them every year. In contrast, when we were walking the Hymany Way a man pulled over to ask if we were walking "the trail". We chat, and he goes on to tell us that he had seen loads of people walking this trail - there were two women walking it just a year ago!

While there are many stakes against them, there are still many wonderful long distance trails around the country - Kerry unsurprisingly has many, being the outdoor mecca for locals and tourists alike. In places like Roscommon and Tipperary we've come across a couple of surprise gems, such as the Miner's Way & Historical Trail. It's a looping figure eight that winds through forests, along old miner's routes and lakesides.

In a dream scenario, no trail would leave a hiker walking on roads. However Ireland is criss-crossed and squiggled with so many tiny boreens that it's pretty difficult to avoid them. What we've found to be a feature of all good walking trails is regular terrain change. Road walking is completely fine as long as it's scattered throughout a trail in short stretches, not lumped all together into one long and painful 12 kilometre stint. A change in terrain keeps the mind stimulated and thinking - even 5 hours on a boggy mountain side can get boring or tiring, and a brief change of scenery wakes us up again. Good examples of this mixing would be the Lough Derg Way. This trail isn't particularly remote or mountainous but it's still one of our favourites as there's so much variety to it. The trail with possibly the least hard surfaces so far would have to be the Barrow Way: walking from Lowtown, just outside Dublin this trail follows the tow path of the Barrow river. It's an amazing trail, grassy banks teeming with nature and life for over 100km. These banks are maintained by Waterways Ireland, who are happy to have hikers pitch up along the banks.

A change in terrain keeps the mind stimulated and thinking

Carl descending to Port Beach, Slí Cholmcille, Co. Donegal
TOUGH SOLES

Carl waiting on the Avondhu Way, Co. Tipperary
TOUGH SOLES

Ellie trying to figure out how her bag just broke, Slieve Felim Way, Co.Tipperary
TOUGH SOLES

The climb on the Slí Gaeltacht Mhuscraí, Co. Cork
TOUGH SOLES

Camping is one of the main reasons we've been able to afford this adventure. We do stay indoors every few days - showers are nice, and depending on how much it's been raining sometimes we just need a place to dry everything out again. We've found more hostels as time has gone on, but in general we haven't had much luck finding budget accommodation. What is very clearly lacking on some trails is any accommodation options at all; be it indoors or suitable places to camp. We're not sure how multi-day trails have been developed without these considerations, and often discuss elaborate daydreams of setting up a series of hiking hostels along some of the trails we've done. This is also probably where owning a car would help!

What is very clearly lacking on some trails is any accommodation options at all

To both document our experience and show other hikers what amazing trails there are around the country, we've been creating videos of every trail we've walked (which was an extra and unexpected logistical problem to add to our already hazy planning!). I also write a blog about the trip, sharing what we've learnt so far. This has lead to us connecting and meeting so many people we would never have met otherwise, which has been incredible.

Going into winter last year (5 months into the project) I broke my foot: a painful experience but a useful excuse to take the cold months off of hiking. This year we thankfully have no such excuse, but are going to be walking a lot less as the temperatures drop. The end of the project is in sight, but still a bit away from us yet. We only have 7 trails out of the 42 left to do, and less than 1,000km - just a stroll in the park at this stage! ■

Ellie Berry is a photographer and writer. Carl Lange previously worked in tech, but has decided to never leave the outdoors again. Ellie and Carl will hopefully become the first people to have walked every National Waymarked Trail in Ireland. They are both Leave No Trace Ireland members and spend most of their time drinking coffee in a tent.
You can follow this walking project at https://toughsoles.ie/
Videos: https://www.youtube.com/results?search_query=tough+soles
Blog: https://toughsoles.ie/blog/
Facebook: https://www.facebook.com/toughsouls
Instagram: https://www.instagram.com/tough_soles/
Twitter: https://twitter.com/toughsoles

European summit

Fergal Hingerty braves lack of oxygen, deep cold and pure exhaustion to climb Europe's highest mountain, Mount Elbrus

The group readying for the final push to the summit of Elbrus
FERGAL HINGERTY

"It is better to live for something than to die for nothing". Viking proverb

The sun's heavenly rays crawled across the western peak of Mount Elbrus and crept metre by metre, centimetre by centimetre, towards our tired and trudging figures which were heading for the top of the ridge. We had been ascending for a few hours now. With only a brief snow storm at around 4 am, we had marvelled at the clear views of countless peaks under the cold moonlight earlier in our morning ascent. We had felt our lungs tighten by the minute as the atmosphere around mighty Mount Elbrus had reached its icy grip into our hearts, lungs and minds. However, nothing was going to stop both our unbreakable and unstoppable determination to soldier on and on in our quest for summit glory.

Waterfall near the Georgian border
FERGAL HINGERTY

Earlier when the sunrise's wonderful golden dawn had sneaked its gaze on us, I was already squeezing and moving the middle fingers on both hands to get the blood circulating to emulate the success in my other fingers. The golden rays had come at a very good and opportune time to revive and resuscitate my frozen fingers. The gloves had not kept me as warm as the manufacturer had so eloquently claimed.

We then slowly ascended up the narrow but steep cut in the snow which was had a rope on the right to mark the optimal route upwards. This was on the edge of the 30 degree-angled slope down to the col below. On the left were scattered streaks of yellow left by the 'gung ho' fools who had paid to get a snow Jet Ski to 5,300 metres. They had mostly not acclimatised and taken a 'Russian roulette' approach that they could make the summit and get up and down quickly and safely. All this whilst recklessly hoping that Mount Elbrus and its deadly icy fingers would not envelop them and make them join the long list of the many fallen on this icy cold mountain.

We eventually reached the top of the ridge and 600 Metres away our goal. The summit was in sight. Mighty Mount Elbrus, whose summit at 5642 metres was the highest mountain in Europe. So how did we get here?

Day 1

What we get from this adventure is just sheer joy. And joy is, after all, the pinnacle of life.

"We do not live to eat and make money. We eat and make money to be able to enjoy life. That is what life means, and that is what life is for" - George Mallory (Everest Climber)

The first day I went to the pickup point at 05.57, to await the minibus. Eventually I was joined by two Polish girls and after a short while the bus arrived with the other climbers on it. They had all flown in on the infamous red eye flight from Warsaw to Tbilisi that morning. We then sped through

the streets of Tbilisi and eventually the Russian Georgian Military highway to the town of Stepantsminda. There we parked outside the offices of Mountain Freaks where Ewa directed the driver to bring all of us to a guesthouse. Breakfast awaited us all. The team consisted of 13 people split between eight men and five women, and was also further split between one Irishman and twelve Polish people.

The excitement and anticipation in the air was clearly palpable. We were all here to fulfil a lifetime ambition for most. We were here to climb Mount Elbrus. The table groaned with a typical Georgian breakfast and everyone tucked into the meal. Shortly afterwards we left and after admiring the towering Mount Kazbek, which looked especially splendid in sunshine, we headed for the Mountain Freaks office. After a short stop there to rent out some climbing equipment, we headed for the border and Russia itself.

The road to the border to and eventually the first stop, Vladikavkaz, followed the river valley through towering peaks and deep canyons and dusty tracks. Eventually we reached the Georgian frontier and passed through that relatively quickly. Between that and the Russian border there was a no man's land of approximately 2 km of windy roads, traffic jams and numerous queue jumpers in unlit tunnels. Definitely not a drive for the faint hearted or the slow witted. At times even the chaos seemed to work in an unusual way. And that does not include the cows wandering on and off the roads! Eventually we reached the border and we were processed in a very thorough way.

A short drive later we stopped in a supermarket in the instantly forgettable city of Vladikavkaz to stock up on supplies as we still had a long journey ahead. The journey passed along the highway through small towns with low lying buildings and fields of wheat. As verdant green hills plunged down to the road there were monuments to battles of the great patriotic war scattered here and there. Despite all this wonderful landscape there was also crumbling old concrete buildings and lumps of steel scattered along the roadside left to rot in the heat.

Soon we headed up the Baksan river valley where recent flash floods had washed the road away in a number

Distant view of snow-clad Elbrus
FERGAL HINGERTY

In the shadow of Elbrus
FERGAL HINGERTY

of places. We reached our destination town of Azau located at 2353 metres above sea level. We went to the hotel and were assigned our rooms and had a few hours to rest before dinner in the restaurant which included some caviar and Vodka which a member of the Polish contingent had very kindly bought.

Day 2

Everybody needs a break
Climb a mountain
Jump in a lake
"Lisdoonvarna" – Christy Moore

We got up at 9 am for breakfast and were told to assemble at 11 am for the first walk to the Terksol waterfall. We arrived having liberally applied some of our factor 50 sun cream as the forecast was good. We walked down to Terksol village. There we met the local guide Abdul, who was to lead us to this local attraction. From the village we took a steep winding track through the forest eventually reaching a plateau with stunning views of numerous peaks on the Georgian border. This wide track than petered out a little bit for the final walk along a very narrow track to a wonderful waterfall.

Whilst there we saw some Russian women strip down to bikinis to duck behind the very impressive waterfall to take selfies which was exceptionally dangerous due to the very slippery rocks. We had lunch and enjoyed the waterfall and the views of the hills around. Afterwards we descended and headed back to the hotel. We had some free time and a long rest before dinner. Afterwards for some of us, there was the excellent sauna in the basement. This day had consisted of a 15.5 km walk and a total ascent of 806 metres to a high point of 2791 metres. An early night ensued as the next day would be a harder and much steeper climb.

Day 3

Climb into the sky, ever wonder why,
Climb into the sky ever wonder why,
"Tail Gunner" – Iron Maiden

Distant Caucasus Mountain peaks
FERGAL HINGERTY

We arose early and after breakfast got a lift to Terksol and this time headed to the opposite end of the valley to climb Mount Cheget. At the bottom of the chair lift there was a track to the left. We were going to climb to the top of the ski lift and get the chair lift down. Today's climb was about acclimatizing and getting the legs working and seeing Mount Elbrus in full for the first time from the high point we would reach.

This was to turn out to be a long hot steep slog of a climb on the track in the heat. The famous song by Jahn Teigen came to mind "Mil etter mil, etter mil, etter mil, etter mil, etter mil" as we headed ever on up the steep slope to a short distance beyond the ski lift station. During the climb we had a few stops to admire the mountains and glaciers on the Georgian border and eventually the magnificent snow-capped twin peaks of Mount Elbrus came into view. We ascended a total of 1084 metres to eventually stop at 3178 metres. We had been baked in the sun despite the odd icy blast from nearby glaciers; for once the factor 50 was vital. Finally we had a chance to look at the most perfect view of Mount Elbrus. As the snow glistened in the strong sunshine the full extent of the forthcoming challenge became apparent.

Than it was over to the ski lift and a descent back to ground level. On the way we noticed people grappling with mountain bikes on the ski lift and trying not to let them fall. They were going up via ski lift so they could than descend on the track we came up. The opposite of what we did in essence.

A quick visit to the local bar and some local meat dumplings called manti and a beer and our day was done. We had a short walk back to the hotel and some time to stock up on supplies for the next day, as we would head up to base camp on Mount Elbrus. A dinner followed by an early night ensured everyone was able to focus on the task ahead.

Day 4

"Never look back unless you are planning to go that way" – Henry David Thoreau

Today was the day! Finally the training, the acclimatisation walks, all the preparation was over and the moment was upon us...Mount Elbrus waits. Nothing can really prepare you for the contrast between the temperature and civilisation of Azau and the icy wastelands and cold that awaited on the mountain.

Mount Elbrus is known as Mini Tau (resembling a thousand mountains) in the local Balkar language. There is nothing 'Mini' about the tenth most prominent mountain in the world, it is such a massive mountain that it has 22 glaciers alone feeding off its permanent Ice cap.

After an early start, it was a short walk to the Gondola station whereby a three stop gondola ride to 3832 metres awaited. As the gondolas and the station changeovers continued we can't help but notice the contrast between the green of the valley and the volcanic rocks and dust and ever nearing snowline. We ascended without too much incident and noticed instantly as we got off the gondola the much thinner air at this modest enough height.

We then descended to our accommodation: a converted freight container at 3735 Metres. This had a split in the middle with the eight men on one side and the six women on the other. A scramble over the rocks led to the

toilet 'a dinny' which was a wooden hut with a hole in the ground. It was important to check the current wind speed when visiting, as whatever you put down the hole could often be blown back up at twice the speed. Also nearby was another converted freight container. This was where we could use our jet boils to cook the water for the packet food and countless cups of tea.

This was to be our home for 4 or 5 days. The snow, due to volcanic ash and diesel fumes from both jet skis and the snow cat, was not fit to melt and boil. So to resolve the issue another steel container had been converted into a shop nearby. This was where water or hot dumplings or tea could be bought. Water is vital up there as dehydration is a constant problem in the thin atmosphere and bitingly cold winds.

As it was early in the day our first climb on the mountain to further acclimatise awaited. We walked back up to the final gondola station which was at the edge of the snow line and walked over a brief plateau and ascended to the Priut 11 hut at 4056 metres – a total ascent of 325 metres. We walked over ice and snow and jumped a few minor ice rivers. At the Priut 11 hut there was a memorial to the twenty, on average, people who die every year on this mountain with photos nailed onto a big volcanic rock.
We descended to the hut, prepared meals and went to sleep. Due to the thin atmosphere very few people slept well that night or so the consensus went. That would improve as we acclimatised better.

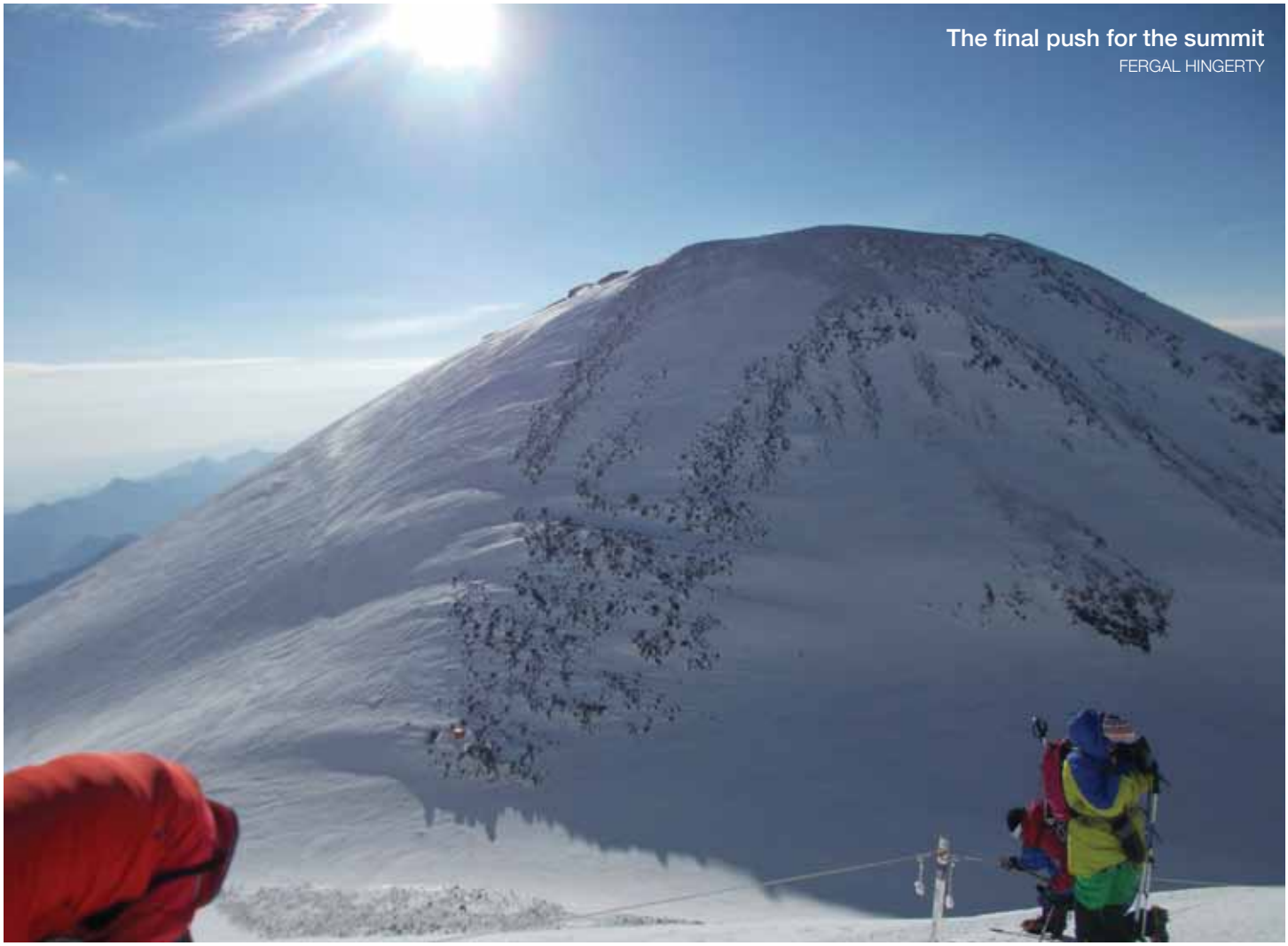
Day 5

"There is no mistake so great, as the mistake of not going on" – William Blake

An early start ensued for us all next morning for the final and highest acclimatisation walk so far. Again we started off by walking to the edge of the snow line at the final gondola station. Than we put on the crampons and started to ascend slowly at first until the slope got steeper and steeper.

We passed the previous day's high point and headed for the Pastukhov rocks. This was a wonderful day, hard going but with sunshine blasting off the snow. We all had on wraparound grade 4 glasses so we would not go snow-blind. It is noticeable when you adjust them even slightly, as the glare off the snow in sunshine is significant.
Factor 50 was also liberally applied that day as well as you tend to burn quicker when the air is thinner also. Steeper and steeper the ascent went till eventually we reached our high point of 4651 metres. We stopped for hot tea and water and sat in the snow and saw for the first time the unbelievable vista. From these point 137 peaks over 3500 metres can be seen.

Amazing views over the wild Caucasus Mountains
FERGAL HINGERTY



The final push for the summit
FERGAL HINGERTY

This was one of the days I or anyone who was there would never ever forget until we die. That view at the Pastukhov Rocks was just unreal and is impossible to describe in reality – if you tried to no words could ever do it justice.

We descended from there relatively slowly as it was a steep descent with a near thirty degree angle on the slope to the brief plateau just below Pruit hut. From there a short distance led to the converted freight container. Total ascent for the day was 921 metres.

Day 6

So, you think you can tell
Heaven from Hell
Blue skies from pain
Can you tell a green field
From a cold steel rail
A smile from a veil
Do you think you can tell?
"Wish You Were Here" – Pink Floyd

This was the rest day as at midnight the activity started for the summit attempt. We lazed around; some took short walks, others slept. Personally I was happy to sleep or sit outside in the sunshine and admire the view which was simply stunning. I had a slightly dodgy stomach so resting was important. Three of the group had decided to climb from the Priut 11 Hut and left at 2 pm. At around four Pm most people cooked and by six pm everyone was asleep. Because, as Wilson Picket famously sang: "I'm gonna wait 'till the midnight hour when there' no one else around" And that was what we all did in essence.

Day 7

"It is difficult to say what is impossible, for the dream of yesterday is the hope of today and the reality of tomorrow." – Robert Goddard

Summit day... Summit day... Summit day... The most anticipated, the most exciting, the most daunting word any mountain climber will hear. This was the culmination of all our efforts, the height of our dreams...the moment of truth. At one minute before the hour we arose and started to prepare carbohydrates and tea. Flasks were filled for later.

Water was also boiled and poured into various expedition-type food packets. These were left to sit after stirring for 8 to 10 minutes. When we were finished eating and drinking, it was a question of last minute checking of bags and double checking gear.

Ice axes were attached, harnesses fitted, gloves checked, crampons checked, head torches checked. Than double layers, triple layers, quadruple layers were put on, hats adjusted, buffs put on. Sun cream was applied as that would be difficult at dawn in sub-zero temperatures. Than we were ready and we were off. We walked out and onto a nearby snow covered area. Here we applied the crampons and ascended a few hundred metres.

We were being given a lift for some of the way by a snow cat. We clambered aboard. Now the moment had arrived. We headed uphill at good pace and then as we got higher the cold hit us. The mountain was extending its firm and icy grip into our lungs, our hearts, and our minds. For now our physicality was not important...the endurance.... the sheer determination....the will to succeed took over.

A short distance up a brief and icy blast of wind and snow hit us. We had arrived at our drop off point whereby we met the three climbers from the Priut 11 hut who had already arrived there. We continued on for a while before once again the wind blew and snow enveloped us. The cold at 4.00 am on a Russian mountain at near 5000 metres has to be experienced to be understood fully. According to the most recent mountain weather forecast it was to be between -18 and -24 degrees with the wind chill at that time and at that height.

The Final Ascent

The wind dropped down and the snow stopped. Once again the moon shone and the view at that height with clear moonlight was magical. We then headed North West on a traverse of the eastern peak of Mount Elbrus. This was a narrow track made through the snow with a steep downwards angle on our left so care was needed. Some wind slab was clearly noticeable on the upper slopes above us as we headed along.

Shortly afterwards we spotted the sun's first golden rays peeping around the eastern peak of Mount Elbrus. We continued on for an hour or more and arrived at the col between the two peaks. There we stopped for much needed warm tea and saw the western peak in front of us. The sun was slowly dancing its way towards us as the warm drops of tea enveloped us and perked us up magically.

This col is where some reckless Russians play that Russian roulette by getting a snow jet ski to this point. They have not acclimatised beforehand and try to get up and down the final short climb hoping the mountain does not catch them before they make it out alive. This is incredibly reckless and you can see evidence of Russians vomit here and there on the ascent, which allied to the death statistics from the mountain make it totally crazy really.

Now the final ascent in a northerly direction took to the ridge. There was a guide rope left by previous guides. We kept this on our left and after a long and slow ascent reached three quarters up the ridge. Another rest with warm tea as the sun's warm glow enveloped us. We were nearly there. Another short climb and we reached the final ridge, a short rest and we started for the now visible summit. 600 metres of gentle incline and the moment had finally arrived. What a feeling, I had done it...the highest mountain in Europe...the tenth most prominent mountain on the planet...the highest volcano in Europe...5642 metres...I had done it...Unreal.

Soon everyone was on the summit photographs were taken, handshakes ensued and euphoria was universal. The view was stunning in all directions, and the eastern summit at 5621 metres looked just as fantastic as the one we were on. The temperature on the summit was -7 and with a wind speed of 10 to 15 km ensured the wind chill was not so bad for once.

Soon we started to descend and with a brief stop at the col for some more tea we continued along the traverse followed by a drop further down the slope. It was then decided that as there was a storm coming in mid-afternoon (and no guarantee of when that could arrive) there was a need to get off the mountain relatively quickly. So a snow cat was summonsed to drop some of us further down the mountain. This ensured that we were able to get to the sleeping quarters quicker than expected. A quick pack and we were on the gondolas and in the village of Azau in jig-time.

Just as we got off the gondola the heavens opened in a thunderstorm. We all got drenched; however it was not too far to the hotel. We did not mind because firstly we had reached the summit and secondly should we not have got the snow cat we could have been in a severe snowstorm much higher up. A euphoric dinner was followed by sleep as we had an early start for a largely uneventful journey back to Stepantsminda the following day. ■

FOOTNOTE: Like Mount Kazbek, safety is vitally important. This mountain should not be climbed without doing a winter skills course first and only with an experienced guide. Any mountain is climbable in sunny weather, broadly speaking. However with storms, cold and tricky navigation Mount Elbrus has proven many times over to be lethal. Also proper good quality warm equipment (including two gloves + mitts is vital as it is an extremely cold mountain.

Standing on the summit of Europe
FERGAL HINGERTY

“Three return tickets please.”

Anyone who is or has been a parent will empathise with this tale of two determined parents trying to subvert the cable-car bureaucracy to go walking with their baby. Did they make it or did they get to use their headtorches? Contains vivid parental discussion.

Chamonix, July 2018

The plan was simple. Leave at 8.30am and make the thirty minute drive to Chamonix. Take the cable car up to the refuge at La Flegere, hike the Grand Balcon Sud and return via cable car at Planpraz. Direct and uncomplicated, what could possibly go wrong?

We arrived nearly two hours late and then wasted another thirty minutes driving around in circles in the ridiculously crammed car park. When we eventually found a space my head was beginning to spin and it had already become quite hot. The mercury was touching 35c.

“Bonjour, three return tickets please, two adults and one baby”

“One moment Monsieur, how old is the baby?”

“9 months”

“Not possible, this is not allowed, minimum age for the baby is one year.”

I explained we had taken Sophia on a very similar cable car two days previously to the same altitude without any problems. The ticket attendant looked at me like I was some kind of naive and deranged idiot. No it was simply too dangerous for babies to go up she said and politely directed me to a “nice little lake” just down the valley where we could bring our child for a gentle walk. It also had beautiful reflections of the mountains on the water.

Gina looked decidedly unimpressed.

“We didn’t travel all this way to look at reflections in a bloody lake!”

Everything went back into the car and we departed in a roar of dust and diesel. Almost immediately we got stuck fast in heavy traffic. It was market day and the roads had become totally congested with vehicles. Shoppers, day trippers, trekkers and groups of climbers, each carrying enough gear to siege the south face of Lhoste twenty times over were also rambling between the grinding halt. The sun beat down and the heat was becoming intense. Eventually after what seemed an eternity we reached the main road and headed off toward Argentiere.

“Let’s find this lake and have some grub, then decide what we’ll do.”

After a couple of kilometres I realized we had gone too far and turned around. So where was this elusive lake? We pulled over for a moment.

“I think her directions got lost in translation, according to the map the lake is not far from the cable car station. Did’nt she say something about it being behind a golf course?

“There’s more than one lake... wait a sec, I want to grab a quick pic.”

I stepped out of the car and looked up at the magnificent vista. The Dru soared directly above. It seemed impossibly high and impenetrable, moody cloud clinging to its lofty summit.

The wide angle lens pushed the mountain back too far, diminishing altitude and drama. In a rush to swap lens before the peak was engulfed by heavier cloud I stupidly sat the wide angle on the roof of the car where

Aiguille Verte and the Dru, Chamonix
LEE GALLAGHER

it promptly slid off and hit the ground with a loud crack.

Banjaxed!!

"I've just wrecked my wide angle lens, slid off the roof!"

And with it, so much of my photography plans. There was no chance of finding a replacement in Chamonix and all I had was my long lens. I was just going to have to use the difficulty.

The lake turned out to be more a puddle than a significant body of water and was swarming with half the population of Europe. Crowds of adults and children were milling around its shores. Wind rippled the surface and a bank of cloud masked the mountains. Gina looked on sarcastically.

'Ive seen bigger potholes on the back roads of Wexford'!

"I've seen bigger potholes on the back roads of Wexford! And there's more reflection in my coffee."

Even Sophia, who had been babbling away quite happily, went silent. We quickly left the so called lake and walked a path into the forest. A trail sign at a confluence read "Flegere 2.5Hrs"

An altitude rise between 800 and 900 meters carrying a baby, camera gear, food, water and other necessities looked wildly optimistic. More like three and a half to four hours. Following a short discussion on the merits and discredits we decided to head up anyway and see how far we could get. We definitively had not driven across France to play happy families at the side of a pond with five thousand tourists.

I figured we would arrive between 3 and 4pm, have an hour, maybe two if we were lucky to enjoy the panorama and get the last car down at five. Gina had anticipated my thoughts.

"I presume going down won't be a problem."

"It won't be, the cable car will be decreasing altitude not gaining."

"We had better make a start so, time is moving on."

The terrain was steep and the path narrow though easy to follow and mostly through forest which mercifully spared us the relentless heat of the sun. Intermittently the trail would break out into the open and the combination of temperature, weight and even steeper ground made the going pretty tough. My forehead and back were dripping with perspiration. For Sophia it was all wonderful though and the harder it became for me, the more fun it was for her. Every step brought a new giggle.

Half way up a slope of open ground I noticed a trekker ascending close behind, moving rapidly. Like myself he was carrying a baby on his back though much younger. I paused to let him pass. He was wearing only shorts and converse and supported the child in what seemed an ultra lightweight carrier but otherwise had no other gear or poles. It didn't make much sense and I was convinced he'd be burnt to a crisp before reaching the refuge. Just as I was about to offer "Bonjour" both he and his female companion brushed past without a word.

We were back under the canopy but the incline was becoming difficult almost eroding the benefit of its shelter. Where a small stream spilt over the trail in a jumble of moss and boulders Gina suggested a break. The ground was momentarily level and the area picturesque compared to the monotony of the forest.

"We must be more than half way?"

"Two thirds I think, the ground is definitely steeper on the final 300 meters."

After another hour of relentless climbing the forest gave way to a clear and barren incline cut with a rough service road winding up around a bend. It seemed the only logical way to go. The protection of the forest was gone and the searing heat almost unbearable. Its effect was instantaneous and we both collapsed at the side of the road.

"I can't go any further I'm exhausted, gim'me some water."

"I've none left."

"No water left? Didn't you refill at the stream."

"I thought you did."

"For Christ sake, you drag us up here in this inferno and couldn't even be bothered to make sure we had enough water! I need food and drink. I can't go any more."

"What'd you mean drag, you were just as enthusiastic as I."

We staggered on a bit further. Just as we reached the bend, the refuge of Le Flegere appeared atop a rocky outcrop like a mirage. It was about 300 meters away but at least 200 feet higher. So near but also so far.

The final steps were steep and excruciating and it felt like gravity was attempting to prevent us from attaining salvation

"Is that it? I don't think I can make it up there without water." Gina was almost delirious with thirst and exhaustion.

"You can't quit now we're almost there."

The final steps were steep and excruciating and it felt like gravity was attempting to prevent us from attaining salvation. Yet we had made it and the relief to be on level ground was palpable. Wearily we rounded the refuge and walked on to the platform. The contrast compared to the relative solitude and quiet of the forest came as a bit of a shock. I had not expected so many people and the seating area was completely packed with trekkers and sightseers. A steady line of hikers were also returning along the trail

from La Blanc and it required a big effort to snatch a table when one became free. Queuing for food and refreshments was equally demanding but at least the climbing was now over.

"Well that was tough but I have to say it's great to be here."

"And a bottle of sparkling water has never tasted so good..."

We both laughed. There was a feeling of satisfaction, a sense we had achieved something.

The view was spectacular. Most of the cloud had dispersed and the late afternoon light brought the entire massif into sharp relief. Mt Blanc glistened in the sun and the Chamonix Aiguilles rose sharp and uncompromising. Aiguille Verte's huge triangular bulk sat alone and almost perfect, the Dru demoted to a gigantic perpendicular rampart.

Two hours passed and we had almost forgotten our toil when the subject of going down became obvious. A long line had formed for the final cable car and we realized we needed to move. Gina got up.

"I'm going to get the tickets before it's full, surely they won't have an issue with a baby going down?"

"I sincerely hope not, but worst come to the worst we can always trek back down."

"Are you F..king crazy..There is No way I'm hiking down again."

"Just joking, It'll be fine, you'll get tickets."

I was having soothing and comforting visions of a quick decent followed by a massive steak and cold beer at a restaurant soon after when Gina returned. Her face said it all.

"They won't take us, something about the velocity being dangerous for a baby bla bla bla."

My delusion quickly evaporated and I glanced down to the valley floor. The prospect of returning on foot was mildly horrifying. If we were delayed for any reason, we might have to descend part of the way in the failing light or even worse, darkness. Gina had lost her previous reluctance and now seemed positively determined.

"We have head torches for that eventuality."

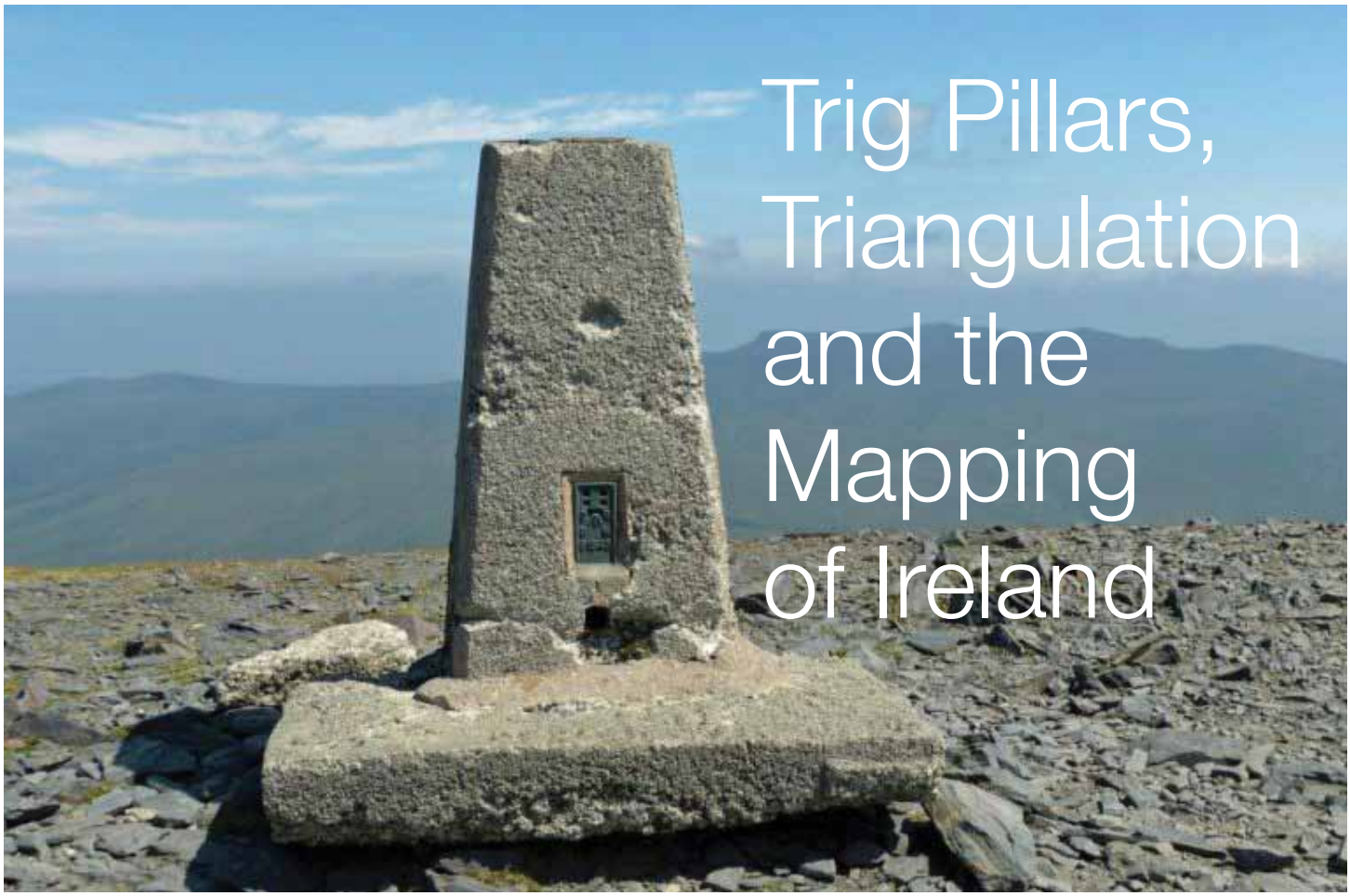
True to form, Sophia was undeterred. It made no difference to her, Daddy was the cable car and that was it.

I took one final look around. Evening was falling, cloaking the high mountains in a beautiful golden hue.

"We better go, there's nothing else for it." ■

Lee Gallagher AKA scannerman

Chamonix Aiguilles
LEE GALLAGHER



Trig Pillars, Triangulation and the Mapping of Ireland

Tom Barragry shares the story of the humble trig pillar, much loved by walkers today, and the mathematical process that made accurate mapping of Ireland possible

WHAT IS TRI... TRIANG... WHAT DO YOU CALL IT?

Triangulation

Triangulation, as applied to surveying, is a simple geometrically-based process that makes one form of accurate map-making possible. It works by determining the location and distance of a faraway object by measuring angles to it from known points at either end of a fixed, known, baseline. For this article we will briefly mention in passing its modern family branch, called trilateration, which also uses triangles but measures distances not angles. Its most famous example is GPS though there are also types of land-based surveying that use it.

Returning to triangulation, it is based on a system devised over two thousand years ago by Euclid, the father of geometry. Trigonometry (the study of triangles) emerged about the third century BC. It stated that a triangle has six parts – three sides and three angles, and it postulated that given almost any three of them – three sides, two sides and one angle, or most importantly, one side and two angles then the other three unknowns can be found. (The ancient Egyptians, Arabs and Chinese also knew similar things.)

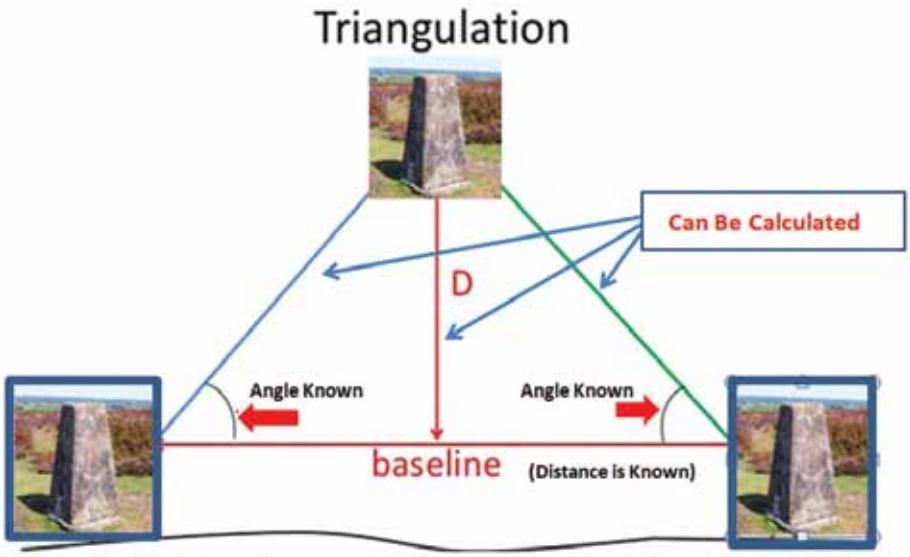
Thus if we have a baseline and two angles, we can draw the triangle, and calculate not only the distance from the apex to the baseline but also the length of the other two sides. This is the very simple basis of the triangulation principle of distance measurement. The entire map can then be composed of a series of small triangles.

NOW WE KNOW WHAT IT IS, BUT WHAT'S IT GOOD FOR?

Triangulation has uses in determining the distance of stars by taking angular sight readings to a distant stellar object from both sides of the globe across the diameter of the earth (the known base line). This method was further improved in accuracy by taking angular sight readings across the diameter of the earth's orbit at six month intervals, thus extending the width of the baseline for greater precision.

In mapping a landscape, if we have the distance between two trig points (the baseline) and two angular sightings from both ends of this baseline to a distant trig point on another summit, then we can calculate the triangle and determine the various distances. Only one baseline ever needs to be manually measured, because all of the

subsequent sides (i.e. distances in km) of all the other triangles can be calculated. Hence, incredible precision and a meticulous approach were needed when measuring the baseline many years ago. A single error in the baseline would be multiplied hundreds of times in all the subsequent calculated triangles.



By knowing the baseline distance, and the two end angles, the distance (d) and sides of the triangle can be calculated. The side of the triangle can then be used as the baseline for the next triangle and so on.

The Triangulation Mapping Survey of Ireland 1824-1842

Europe after the French Revolution was in turmoil with Austria, Russia, Turkey and Napoleon's France all flexing their collective muscles; and the Napoleonic wars were just over the horizon in 1803.Without good maps Britain felt vulnerable and could neither position its army strategically nor defensively.

A METHOD OF DEFENCE

The Ordnance Survey (OS) was established in Britain in 1791 to prepare a detailed map of the country and thereby help defend Britain from external attack; concern was rife about Napoleon's ambitions at that time. The origins of Ordnance Survey in Britain go back to a triangulation survey carried out for King George III and The Royal Society between 1784 and 1790. The survey determined the relative positions of the Greenwich Observatory and L'Observatoire de Paris, and measured the distance between the two observatories. Major General William Roy carried out the survey under the authority of the Master General of the Board of Ordnance, and Roy's first action was to measure a survey base-line across Hounslow Heath during the summer of 1784. (You may have wondered where the name "Ordnance Survey" comes from. It dates from the Board of Ordnance, which supplied the English Army with weapons, arsenal etc. Surveying was just one of the resources they created.)

The Hounslow Heath baseline was approximately five miles long. The two terminals of this base-line are now marked by contemporary military cannon set in the ground, muzzle upward. The north-western portion of the base-line is currently occupied by Heathrow Airport. This baseline was used in the future mapping of Britain and became the core line measurement for the triangulation process for mapping Great Britain. By 1794 mapmakers had started the triangulation of the English coast from Sussex to Dorset. The coastal areas were initially of greater priority to the OS because of their strategic and defensive nature. It was also believed in London that Ireland required attention in this regard also, for broadly similar military reasons as well as for the purposes of land taxation.

Accordingly, after 1800, many of the British OS staff members were shipped across the sea to Ireland to instigate an Irish mapping project and to produce a detailed six inch map of Ireland. The Ordnance Survey of Ireland (OSI) was established in 1824 as part of this British army (post 1800 Acts of Union) plan to create a detailed map of Ireland. This mapping project for Ireland had the objective of providing an accurate representation of lands, landscape, town lands, villages and holdings. This would in turn facilitate the collection of local taxes, identify boundaries, and also would be useful to Britain for other regulatory concerns and military planning. As today, Irish issues intrude on British planning, a relevant example being the failed Irish insurrection of 1798 and Emmet's 1803 abortive uprising. In the 1790s in particular Britain realised the importance of knowing and policing the Irish landscape. (An example was Lord Cornwallis's building of the Military Road in Wicklow)

In the early 1820s a consistent island-wide valuation of property was initiated by the British parliament as a basis for an effective taxation system, involving landlords and their large estates, as well as smaller town lands and parcels of land. At that time, the OSI office was located in Mountjoy House in the Phoenix Park, a building that was originally constructed in 1728. It later housed the cavalry of the Lord Lieutenant who lived nearby in the Vice Regal Lodge in the park. The OSI continued to operate under the agency of the Dept of Defence until 1924 when it was transferred to Ireland.

The comprehensive mapping and triangulation of Ireland was commenced by the OSI in 1824 and was completed

in 1842. Ireland was the first country in the world to be so extensively mapped in such detail and at a scale of six inches to one mile (1:10,560) with parts at 25 inches to the mile. The work was carried out by over 2000 members of the Royal Engineers. Major Thomas Colby was initially in charge of the survey which produced many innovations and novel scientific techniques. Some independent Irish engineers were also recruited and were involved in the survey. These engineers were under the control of Richard Griffith, later to become famous for his national valuation.

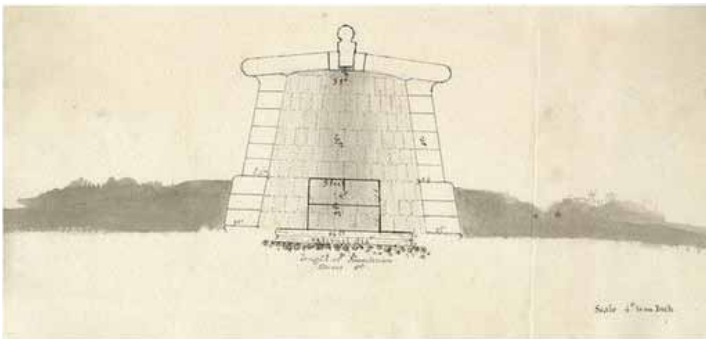
Numerous triangulation stations (trig stations) and temporary triangulation buildings were built and established at various high points in Ireland. These buildings were used for visual observations using light sources and reflectors

Triangulation building at Magilligan

WHAT IS THAT LIGHT I SEE?

Thomas Drummond was the principal surveyor in this project. He had a problem in that some of the visual sightings from station to station extended over long distances, and thus Colby needed more powerful light than that provided by the Argand Lamps he was using.

Drummond had studied chemistry and seen a demonstration of the effect of heating calcium oxide (quicklime) in a flame generated by burning hydrogen in oxygen. Calcium oxide doesn't melt until well over 2500oC – and at high temperatures gives off the brilliant



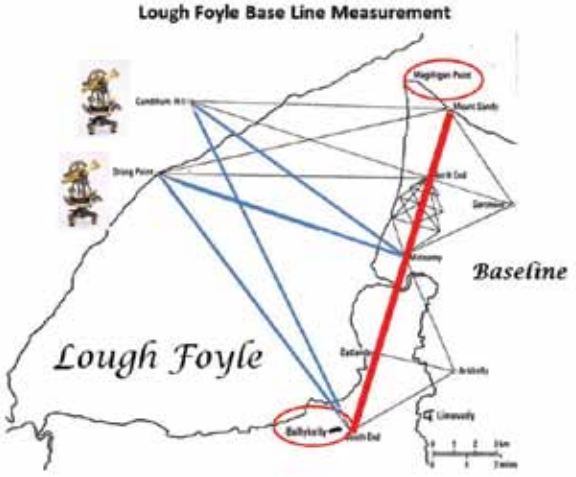
white 'limelight'. Drummond refined this principle for use in surveying though replaced the hydrogen with the cheaper and less explosive alcohol. As a small digression from this article we can mention that Drummond became appalled by the situation he found while surveying Ireland and went into politics as Under Secretary in 1839 taking a hand in reorganising the RIC, not necessarily popular from an Irish historical standpoint.

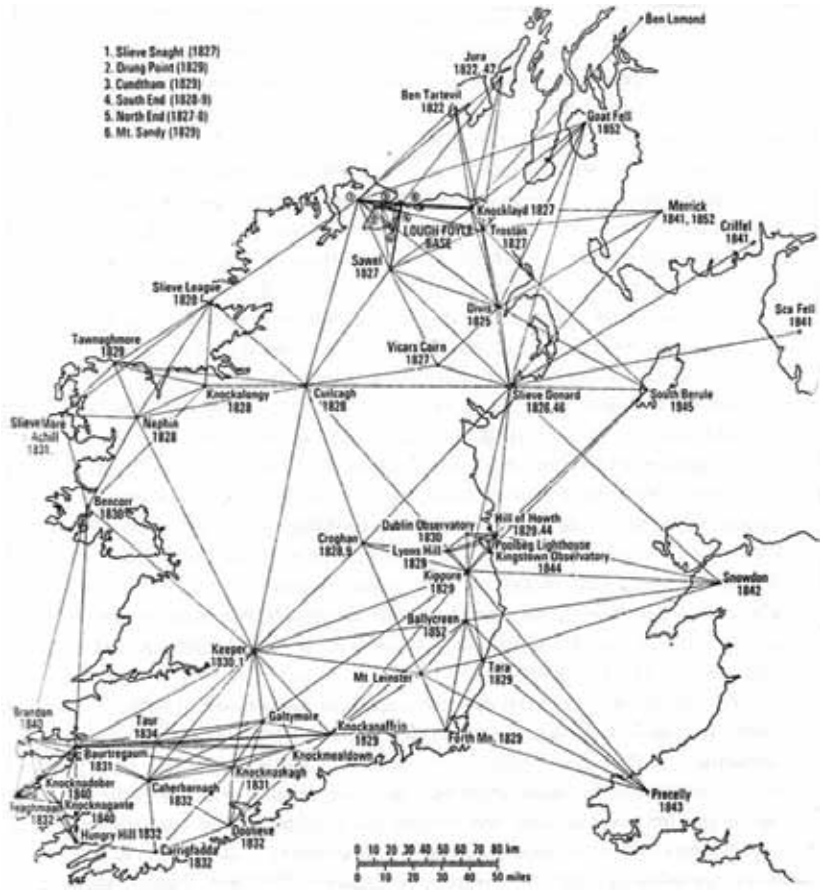
Colby and Drummond also invented 'compensation bars' of iron and brass which allowed more precise measurement of linear distance used for the baseline. These allowed expansion and contraction of the metals, when temperatures varied. Colby factored in the coefficient of expansion for greater accuracy in the eventual measurement of the linear distance. Thus greater consistency and precision was guaranteed in his linear measurement.

Measuring the Baseline

The process of triangulation needs a baseline to be accurately measured. This is the base of the triangle which, with two angles, allows the triangle to be drawn and the distance to be determined. In order to complete the network of triangles, the length of one leg of one triangle had to be measured carefully. The longer the leg the greater the angular accuracy.

The OS in Britain had done all this years earlier in 1784 and calculated a baseline using that five mile stretch along Hounslow Heath. The leg chosen in Ireland as the core national triangulation baseline was along the shores of Lough Foyle in Derry/Londonderry. This was known as the Lough Foyle baseline. Once this was measured, all other smaller triangles and measurements fell into place. The accuracy of measurement of the Lough Foyle baseline was paramount. Errors due to inaccuracies in the baseline measurement would amplify as more triangles were calculated. Measurement of the Lough Foyle baseline began in 1827 and lasted for 60 days. The distance of 7.89 miles was carefully measured by 70 men using tripods and compensation bars. The baseline started at Magilligan and extended to Ballykelly near Derry. Once the two end- angles were known, this single measurement alone was sufficient to calculate the lengths of all the other sides of all of the other triangles. The Lough Foyle base was re-measured,





using modern techniques, in 1960 and the result differed from the 1828 value by only 2.5 cm!

.LINES, LINES EVERYWHERE – AND CROWS' FEET!

Other persons were involved in the 1824 survey because engineers of the British Army and British OS staff could not undertake every single aspect of the work such as local Gaelic place names, Irish language derivations, archaeology, and local history. Musicologist and archaeologist George Petrie assembled a team for this purpose, including Irish scholars, John O'Donovan, Eugene O Curry, and James Larson, and some painters and poets including James Clarence Mangan. These people supplied much of the corroborative detail and local colour into the mathematical material of the large scale maps, e.g. placenames, Gaelic derivations, populations, economy, agriculture, etc.

Petrie, Larson and John O Donovan, in particular, extensively researched the origins and history of local Irish place names and drew up translations. Petrie also headed the Survey Topographical Department

Benchmarks were also a part of this first survey, and used to record the height of land features above sea level. The height of a point above sea level was marked with the shape of a crow's foot cut into bricks, walls, corners and buildings. The reference point for sea level was set at the low watermark of spring tide at Poolbeg Lighthouse on April 8th 1837. These cut arrows /crowfeet were the commonest form of benchmarks and consisted of a horizontal bar cut into a wall or benchmark. This bar was the actual benchmark. A broad arrow was cut immediately below the centre of the horizontal bar. This gave the 'crows' feet' appearance.

By 1846, the entire island of Ireland had been surveyed and a series of 2000 maps at a scale of six inches to the mile had been published. The total cost of the survey was £860,000. Ireland was the first country in the world to be mapped at this scale, and by 1867, from Fair Head to Mizen Head had been surveyed in great detail and Sir Richard Griffith and his team moved in to commence their valuations (Griffiths Valuation)

Re-triangulation

In the UK in the early 20th century, map making was still based on the Principal Triangulation which was a piecemeal collection of observations taken between 1783 and 1853. The system was starting to collapse and couldn't support the more accurate mapping needed to track the rapid socio-economic development of Britain after the Great War. This led to Hotine's development of the trig pillar and, using it, a much more accurate mapping of the UK commenced in 1935.

In the UK, the process of placing trig pillars on top of prominent hills and mountains began in 1935 to assist in the accurate re-triangulation of Great Britain. Over 6500 trig pillars were constructed across the length and breadth of the UK to map the country more accurately and with greater precision. They continued to be used until 1962.

The Re-triangulation of Ireland 1952 and 1959

OSNI began their re-triangulation of Northern Ireland in 1952. In the Republic, OSI began the work in 1959. This time, instead of the temporary buildings known as 'triangulation stations' used in the 1824 survey, high measurement points were replaced by the construction of 'triangulation pillars' or trig pillars.

The modern trig pillars we see all date from then and not from earlier. Sometimes there is misinformation about this such as an Irish Times article from 2008 which said they were constructed by the British military in 1830s. (https://www.irishtimes.com/life-and-style/guided-by-crows-feet-1.938376)

Irish trig pillars were essentially designed and constructed on the principle of the British Hotine trig pillar model which had been used in the UK from 1935 onwards into the 1940s.

Concrete trig pillars often required donkey power to deliver construction materials to the summits. All pillars were made by hand and amazingly all materials and equipment were carried to the tops of the hills by the surveyors and their staff or assistants. Recording of data and sight lines was not always easy on account of problems of high winds or visibility at summits. Often the surveyors had to camp on the summits.

In Ireland as in the UK, these new trig pillars gave rise to more accurate triangulation techniques because they used precision theodolites on top of the pillar and were positioned over a centralised sunken brass bolt.

This very accurate process of triangulation measurement gave rise to the Ordnance Survey maps as we know them today. The coordinate system used on these trig pillar based OS maps is known as the Irish Grid.

If you look at a modern GPS you will see that there is a choice of two grids for Ireland. It usually appears as:

- Irish Grid or IG or Ireland 1965
- Irish ITM 95 (ITM= Irish Transverse Mercator)

All small scale OS maps both from the OSI and L&PS (NI) use Irish Grid. So do most other maps such as those from East-West mapping.

CAREFUL WITH THOSE NUMBERS

As a short digression, ITM based maps can be found for larger scale maps such as you might have for a property or an archaeological site. While ITM has a number of advantages it is longer in use compared to the brevity of Irish Grid coordinates, is harder to get off a paper map and has no history of use. For example the 10 digit Irish Grid reference for Caher is V79261 83891, usually shown as V792 838, further abbreviated to 792 838. The equivalent in ITM would be 4792, 5839, were abbreviation allowed. However generally it is shown in full as 479237, 583950. As this case shows, there is no simplistic conversion from abbreviated coordinates in one system to the other. In this case if you thought you could simply copy the 838 northing figure into ITM in a 6 digit grid reference it would have been 100m out, which, on Caher could lead to a long drop off a north cliff were you using a pratnav approach.

More on the levelling

The Poolbeg reference point remained until it was superseded, in 1952 for Northern Ireland, by the Belfast Datum and in 1970 by a point at Malin Head for the Republic. The Malin Head tidal station was built with cooperation from OSNI. The difference between the modern Malin Head and Belfast Datum is that Malin Head is 3.7 cm above the Belfast datum. Not much. Of course all this depended on averaged measurements of sea-level. As a result of global warming sea level around Ireland has been rising 3.5 cm per decade since 1990 to a likely change of around 60 cm by year 2100 (though some say 2m is more realistic). Effectively the low water points are now agreed underwater points. Were the levels to be measured with a 60cm sea rise then about 3 mountains such as Knockreagh, Crott and Butter could cease to be Arderins. Of course, this is insignificant compared to the world wide flooding, loss of wetlands, erosion, release of dumped plastic and storm-surges that will also be a result.

More on trig pillars: Martin Hotine & the Triangulation of Britain in 1935

As we mentioned before, in the UK in 1935 the British Ordnance Survey decided to implement a complete new mapping and grid network for the whole country and at the same time unify the mapping from local county projections onto a single national grid and reference system. This lead to the establishment of the OS GB 36 datum and the UK National Grid, both of which are still operational today. A key point of this measurement system was the trig pillar.

The man responsible for the design of the trig pillar that we all recognise today on mountaintops all over Ireland and Britain was Brigadier Martin Hotine. Born in 1898 in London, Hotine became head of the Trigonometrical and Levelling Division at OS in the UK.

Hotine was responsible for the design, planning and implementation of the triangulation process of mapping. In order to provide a solid base for the theodolites used by the survey teams and to improve the accuracy of the readings obtained, he invented and designed the iconic trig pillar. As a result, they are sometimes referred to as 'Hotine Pillars'. A benchmark is usually set on the side, marked with the letters 'OSBM' (Ordnance Survey Bench Mark) and the reference number of the trig point. (Within and below the visible trig point, there may be concealed reference marks whose National Grid References are precisely known.)

Note: trig pillars in the Republic of Ireland generally lack the side benchmark.

TRIG PILLARS: THE HARD FACTS

Trig pillars are the common name for 'triangulation pillars'. These are concrete pillars, about 120cm tall, used by the Ordnance Survey in the UK and Ireland in order to assist in cartography and distance measurement.

They are generally constructed at the highest altitude possible in an area, so that there is a direct and unobstructed line of sight from one trig pillar to the next. Measurements of the angles between the lines-of-sight of other trig points then allowed the construction of a system of triangles which could be referenced back to a single baseline to construct a highly accurate measurement system that covered an entire territory. A theodolite is used as the key instrument in such calculations. A theodolite in essence is a protractor (angle measurer) set into a telescope. It can operate in the horizontal and vertical plane. By sitting the theodolite on the top of the flat concrete pillar (the 'spider' or 'top plate') accurate angles between other nearby trig points can be measured. In practice, a theodolite would have been secured to the top mounting plate and made level. It would then be directly over the brass bolt underneath the pillar. Angles were then measured from the pillar to other surrounding points.

A theodolite is a precision instrument and before focussing and measuring angles through the eyepiece, a number of preliminary procedures must be undertaken:

- Setting up - fixing the theodolite onto a tripod or base along with approximate levelling and cantering over the station mark. The theodolite had to be lined up directly with the brass bolt below and within the pillar.
- Cantering - bringing the vertical axis of theodolite immediately over the station mark using a cantering plate also known as a tribrach.
- Levelling - levelling of the base of the instrument to make the vertical axis vertical usually with an in-built bubble-level.

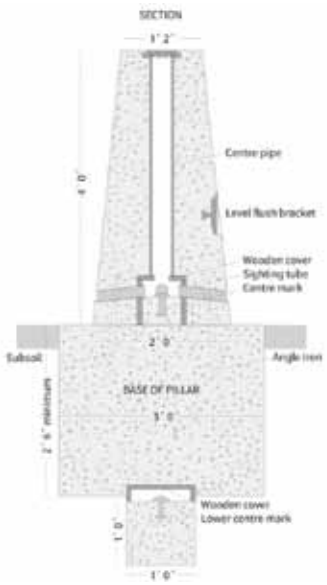
Thus to facilitate the accuracy of the theodolite , a trig pillar must be accurately and precisely constructed, in terms of the level spider or top plate, the central core and the brass bolt set into the base.

With the advancement of modern scientific procedures and the arrival of better and more accurate technologies and digital techniques such as satellite technology and GPS and digital combinations, the original traditional trig pillar is now obsolete and redundant in its original guise. Nonetheless, an interesting point is that despite their relatively simple nature, the measurements made via theodolites and trig pillars were incredibly accurate and when compared with GPS measurement years later, the distances calculated vary by only millimetres or a few centimetres.

Since angular measurement is such a precise visual science, the pillar on which the theodolite is placed must be of very solid and reliable design. The pillar was of concrete built over a concrete box that just protrudes over soil level. The top of the pillar had a spider or top plate for the theodolite. A flush bracket was located on the side of the pillar displaying a bench march and OS serial number. Originally this was an indentation holding a metal plate. Then it was made 'flush' with the pillar (flush bracket). It always displays the bench mark (BM) giving the height above sea level and the serial number of the trig pillar. The trig pillar is usually a hand-cast concrete pillar, 4 feet high and 2 feet square at the base, tapering towards a flat top.

The Hotine Design

OSI mostly followed the Hotine Design, though not in all particulars. The original Hotine design, consisted of a brass bolt set in concrete. The bolt over which the theodolite would be centred is inserted at a sufficient depth below ground level to be independent of the pillar foundations. This is a key central reference point.



This depth naturally varies with the soil; on boggy ground, which was often encountered on hilltops, it was sometimes necessary to excavate as much

as 15 feet before reaching rock or firm soil on which to emplace the lower mark. In such a case a correspondingly deep pillar foundation is necessary, whereas on out-cropping solid rock, a bolt is simply cemented in a hole drilled in the rock. Often times, depending on the soil, the trig pillar could be compared to an iceberg with more below the surface than above it.

The lower centre mark and its concrete setting was covered with a small wooden box (which eventually disintegrates) to prevent adherence to the pillar base.

Concreting of the pillar base was commenced immediately over and around the box covering the lower mark, Concreting the pillar base was continued up to ground level where it was left rough to set. Four angle iron bars were then set in the base to project well up into the corners of the pillar, as a means of preventing fracture between the base and the pillar. The pillar bolt (upper centre mark) was also set in the base. The pillar bolt was next covered with a small wooden box, which was provided with side holes (to take the inner ends of the four sighting and drainage pipes) and a top hole (to take the lower end of the galvanized pipe running down the centre of the pillar).

Wooden shuttering was then erected on the pillar base. This shuttering had four side holes to take the outer ends of the four sighting pipes, which are then inserted, and a wedge fillet to which the level flush bracket in one side of the pillar may be wired in a vertical position. It also carries wooden corner fillets to provide an automatic chamfering to the edges of the pillar.

The centre pipe, which serves as further reinforcement, was set in position and plumbed, the plumbing being continually checked during concreting. Before the concrete set, the brass spider, complete with holding down bolts, was set over the centre pipe and was carefully plumbed over the pillar bolt from a special temporary fitting to the spider. Concreting was then carried up to the top of the spider.

Top Plate or 'spider' for theodolite

On the top of every trig point is a brass plate with three arms which was used to mount the theodolite.

On one side there is an indentation with a metal plate and here is found the benchmark

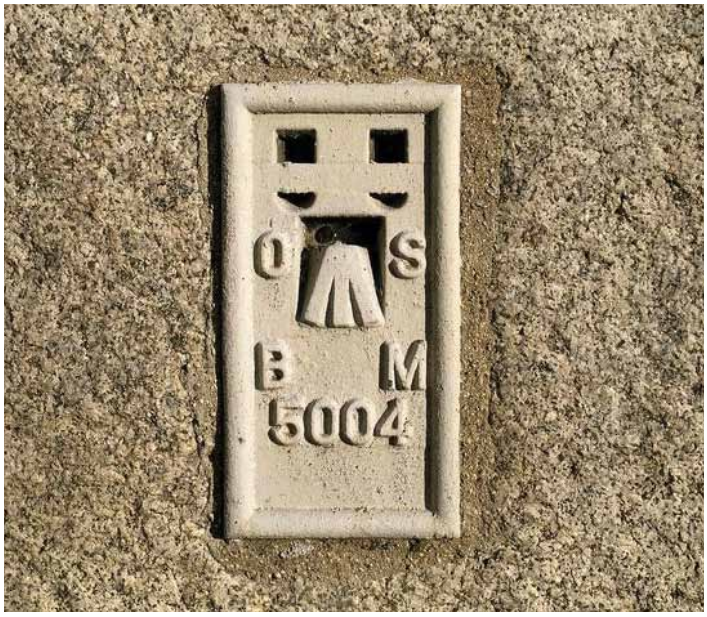
Trig point built on boggy soil, now eroded, showing the large fraction of the pillar that lies underground

Benchmarks on the side of Trig Pillars

A benchmark (BM) forms the reference frame for heights above mean sea level. If the exact height of one BM is known, the exact height of the next can be found by measuring the difference in heights, through a process of spirit levelling. Benchmarks are on the sides of Trig

Pillars in the form of a flush bracket. These can be seen on trig pillars in Northern Ireland though not usually in the Republic.

The term benchmarks derives from the chiselled horizontal indented line that the surveyors made in stone structures, into which an angle-iron could be placed to form a 'bench' for a levelling rod (graduated measuring rod). A surveyor's 'bench' is a type of bracket onto which measuring equipment is mounted. These lines were usually indicated with a chiselled arrow below the horizontal line.



Flush bracket showing bench mark on side of trig pillar. The BM number, the recess for the 'bench' (bracket), and the arrow (crow's foot) are clearly visible.

WHAT WILL THE FUTURE BRING?

Although trig pillars are now obsolete and often in some disrepair, their role having been overtaken by satellite technology and GPS, many hillwalkers now like to bag trig pillars (trig pointing) and add them to their collection.

On ownership of the trig pillars, we received the following in an email from Katy Fitzpatrick of OSI in August 2018:

"We continue to own the trig pillars, we are responsible for the maintenance and removal of damaged pillars. It's a project we've only just started so we're currently only checking the condition of them when we have people in the area.

There is currently no legal protection for them, I believe that the Taillte legislation will provide for the protection of all OSi infrastructure but for now there is nothing at all to stop someone removing them. "

Trig pointing is now becoming quite a popular hobby, perhaps more so in GB (there's a lot more pillars there). In 2016 a UK hillwalker, Rob Woodall, bagged and visited all 6,000 plus trig pillars in the UK – for which he received an award.

With the advance of satellite mapping, the Ordnance Survey in Britain has decided to retire 5,000 of its 6,000 trig pillars because they are no longer needed to pinpoint accurately the positions of landmarks. The Ordnance Survey (GB) has decided to stop inspecting and maintaining these pillars and is looking for people who will volunteer to do it for them. In the UK thousands of people all over Britain are volunteering to adopt abandoned 'trig pillars'. About 2,000 of the 5,000 redundant pillars have already been assigned on a first come, first served basis. The person adopting must inspect the pillar twice yearly and paint it when necessary.

This clearly gives another meaning to the term 'pillars of the community'! Maybe this might also happen in Ireland.

Although trig stations and trig pillars are now redundant, they are greatly loved by hikers and mountaineers as navigational aids and as a type of comfort blanket – if somewhat austere. It is always a pleasure for most hillwalkers and hikers to reach a summit, no matter how big or small, have a photo taken at the trig pillar, or to take time out and sit in the sunshine and unwrap one's sandwiches, while resting against these small historical monoliths.

Our plea

We would hope that OSI and their equivalents in L&PS (NI) will adopt a sympathetic policy towards the heritage that the trig pillars represent. Perhaps protecting some and allowing the adoption of others. ■

Summit trig on Mweelin in the Shehy Mtns
BRENDAN O'REILLY

Irish Gallery

Outstanding photography from MountainViews members in 2018

2018 WINNER Gleniff Schoolhouse Aidy (Aidy McGlynn)

2018 RUNNER-UP Twelve Bens Sunrise GSheehy (Ger Sheehy)

Irish Gallery

Outstanding photography from MountainViews members in 2018

Croaghaun, Achill 📷 Simon3 (Simon Stewart)

Derrybawn Misty Sunrise 📷 Colin Murphy

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Errigal & Devlin River 📷 Purple Peak Adventures

Glenlough Bay, Donegal 📷 Aidy (Aidy McGlynn)

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Knappagh Lough, Twelve Bens 📷 Mark Wallace

Slieve Bearnagh from Slievelamagan 📷 Aidy (Aidy McGlynn)

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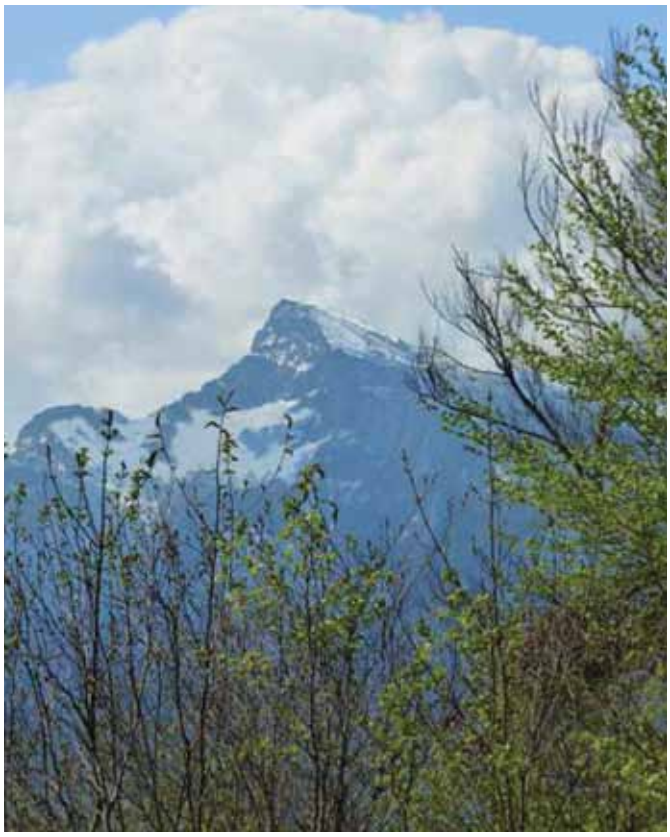
Calderón Hondo, Fuerteventura, Canaries Simon3 (Simon Stewart)



Untersburg, Austria Colin Murphy

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