

JOHN MUIR TRUST

JOURNAL

68 SPRING 2020

- 16 What marine strandings tell us about the health of our seas
- 22 The prospects for change in Scotland's deer management
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What lies beneath...

Protecting our coastal riches

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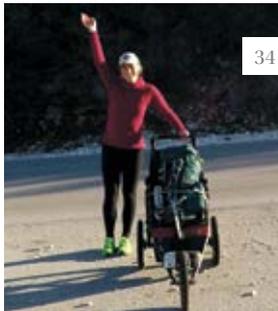
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PHOTOGRAPHY (CLOCKWISE FROM MAIN): HOWARD WOOD/COAST; ROSIE WATSON; PETER CAIRNS

COVER: INQUISITIVE GREY SEAL PUP, SHUTTERSTOCK

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**JOHN
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New values in a changing world

WELCOME to this spring edition of the *Journal* and my first chance to share thoughts with you as the Trust's new Chief Executive. I am delighted to be here and during my first couple of months have found a vibrant, dynamic organisation and colleagues who are warm and welcoming.

As I write, a global pandemic spreads rapidly, threatening lives and disrupting the whole of society. My priorities are, firstly, to ensure the health, safety and long-term welfare of our team; and, secondly, to set up new systems that will allow our work to continue to the best of our ability. We know that Trust members will act responsibly by looking after themselves and their families, and by following government advice to take whatever steps are

necessary to protect the most vulnerable in our communities.

You can read more on page 6 about the changes we have introduced as of late March. We are, however, in uncharted territory. Things are changing day by day, and by the time you read this issue some of our plans may already have been overtaken by events.

The Trust has always raised its sights beyond the immediate horizon. Politicians by necessity tend to focus on the next five years, while those of us involved with the environment tend to think in decades and even centuries.

Just before starting work with the Trust

I was climbing in Patagonia with my son. We based ourselves in the village of El Chalten within Los Glaciares National Park, now only 30 years old. With a resident population of 1,500 it has become the destination of choice for many in South America wishing to see the spires of the Torre and Fitz Roy ranges. Its wild nature makes it an economic gold mine for the local community.

In December and January, the village was experiencing blistering tourist growth, with visitors outnumbering the local population by six to one. Although on a different scale, its 'wild' economic potential reminded me of the opportunities and pressures on some of our own communities in the Highlands, the Lake District and elsewhere. Now, in

March, everything has changed: the mountain trails are closed, the villages deserted and the hostels empty.

While the Trust needs to be flexible and nimble in responding to change, we also need to stand firm in defence of our principles and our long-term vision. Our natural assets have been subject to attrition for a long time and the places of our youth no longer exist as we remember them. We've accepted degradation politely and with grace, cowed by arguments that we need relentless economic growth, and pressured into accepting rural policies that, however well intentioned, are oblivious to the need for sustainable, place-based economies.

The attrition of our natural assets respects no border and is driven by the choices we make. From TV documentaries we learn of the destruction of the rainforests of Amazonia, the mass pollution of our oceans by plastics, the melting of the polar ice caps. We are less aware of the gradual, insidious destruction of nature on our own doorsteps. The overgrazing across large areas of our uplands, driven by the interests of a minority who kill wildlife for sport, is an issue that we explore further on page 22.

These activities do create a small number of jobs, but with change now looking likely, we need to help those in the 'game' industry secure future employment as stewards of the land. To secure their trust, we need coherent strategies for rural economic development that respect and understand the connection between society, people and place.

I recently attended a meeting in the Scottish Parliament with community landowners all proud of their natural environment and aware of its importance. Within their communities, they face matters of pressing urgency, such as providing affordable housing, broadband connections to facilitate entrepreneurial activity, and leadership to develop a place-based approach and help the land uses created by the Victorian era adjust to the needs of contemporary society.

To be relevant and effective, the Trust will increase its engagement with local people to improve lives, create viable economies as well as to help restore and revitalise landscapes and ecosystems.

Finally, in the midst of this great global effort to see off a devastating threat, I see signs that people may be more willing than ever before to reassess their priorities. To reset their values. To think about what really matters. We are on this planet for only a short time, but our land, our seas, our rivers remain. And the decisions we take today will have repercussions far into the future.

Will this crisis act as a wake-up call for the benefit of nature and wild places? I hope so and look forward to working with the John Muir Trust in the years to come as we seek to convince many, many more people to join us in the journey towards a wilder future.

David Balharry
Chief Executive, John Muir Trust



PHOTOGRAPH: JOHN MUIR TRUST

Sandwood Bay in
all its glory

PHOTOGRAPH: PETER CAIRNS/SCOTLAND, THE BIG PICTURE



Wild Waters
APPEAL

Wild Waters Appeal launch

This spring, we are launching a new appeal to help care for two of our most spectacular coastal landscapes.

Funds raised through our ongoing Wild Waters Appeal will help safeguard the shores, lakes, lochs and rivers across all the wild places we care for, beginning with two iconic coastlines – spectacular Sandwood Bay in Sutherland and the rugged shore of the Strathaird Peninsula on Skye.

Looking after coastal areas such as these can be uniquely challenging, starting with the endless plastic that washes up on beaches during storms and which poses a threat to seabirds and other wildlife. Our rangers and volunteers carry out regular beach cleans, clearing huge volumes of plastic and other debris from the shoreline.

In addition, the well-trodden paths face significant pressure both from the harsh weather and high footfall. As such, we now need to carry out essential repairs on the Sandwood Bay and Elgol paths, maintaining access while protecting the fragile plants, animals and soils, including areas of important peatland, from trampling and erosion.

Your support for this appeal will also help to fund other vital work at Sandwood and Skye, including monitoring important habitats such as machair, blanket bog and shrub heath as well as carrying out our long-running and vitally important surveys of seabird populations.

For much more information on the Wild Waters Appeal, including how to donate, please visit johnmuirtrust.org/wildwaters

Coronavirus and the John Muir Trust

We go to print just as the UK has been put into lockdown to combat the spread of the coronavirus. These are extraordinarily anxious times, which are having a severe impact on all our lives.

As a socially responsible environmental NGO, we have implemented government guidelines from the start of this crisis to protect our staff, volunteers and the communities in which they live and work. From mid-March onwards, we have introduced the following measures, which will remain in place until further notice:

- Closed the Wild Space visitor centre
- Arranged for staff to work at home
- Cancelled face-to-face meetings in favour of phone and online discussions
- Closed the Pitlochry and Edinburgh Leith offices
- Suspended public access to all toilet and car parking facilities managed by the Trust
- Suspended all work parties
- Cancelled the annual Members' Gathering scheduled for 5-7 June
- Postponed AGM and explored arrangements for it to be held online via video link.

Like every other organisation and individual, we are entering unknown territory. We will continue the work of the Trust, but the steps we are taking to play our part in the fight to stop the rapid spread of coronavirus will inevitably mean a temporary scaling down of this work.

If it is necessary to contact any member of staff during this period, please do so via email. Addresses are available at johnmuirtrust.org/about/team

Finally, we thank all our members for their continuing support of our work, morally and financially if not physically at this time, and wish you all the very best during this difficult period.

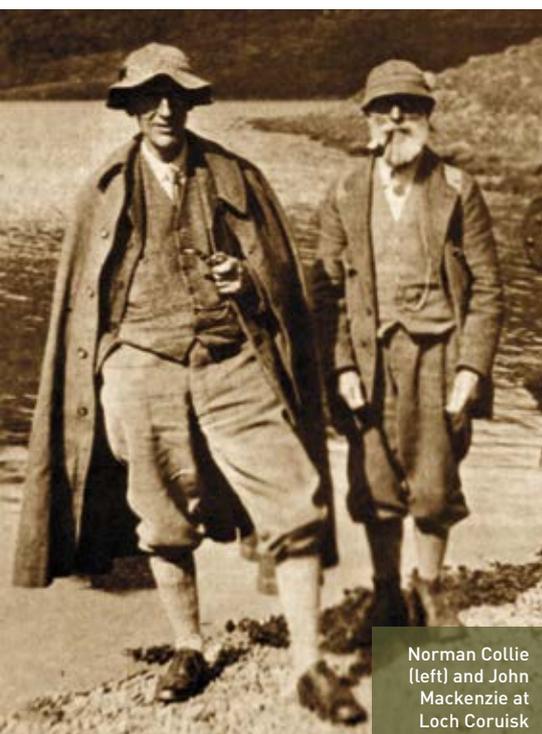
Collie Mackenzie statue go-ahead on Skye

The Trust is delighted that Skye's Collie Mackenzie Heritage Group has met its final fundraising target and that plans for a full-size bronze statue on Trust land commemorating pioneering mountaineers John Mackenzie and Norman Collie will now go ahead.

Born in Sconser in 1856, Mackenzie was a keen explorer as a boy, famously climbing Sgùrr nan Gillean at the age of 10. By the time he met climber and scientist Professor Collie in 1886, he was already established as a guide and credited with numerous first ascents. Despite very different backgrounds, the two became good friends and pioneered many of the technically challenging routes in the Cuillin range that mountaineers continue to enjoy today.

Raising the money for the statue itself was the final piece in a puzzle that has involved landscaping enhancements at the Sligachan Gateway, including the undergrounding of electrical cables, a new car park, stone seating and interpretation. A true community initiative, the Heritage Group has worked with local schools, artists and relatives to capture and celebrate the achievements of the pair for well over a decade.

The full-sized bronze statue is set to be unveiled at a ceremony on site next to the Sligachan Hotel in September 2020, at the entrance to the route into Trust-managed Glen Sligachan. It's a path that Mackenzie trod thousands of times in his work as a hotel pony boy, and later as Scotland's first professional mountain guide.



Norman Collie (left) and John Mackenzie at Loch Coruisk



PHOTOGRAPH: STARLING LEARNING

Joe Greenless from Starling Learning demonstrates tree planting technique to volunteers

Trust supports Clydeside rewilding project

The Trust is supporting an exciting rewilding project in the Renfrewshire hills, just outside of Glasgow. The Yearn Stane Project started in January 2017 when aspen specialist Peter Livingstone from a local social enterprise, Eadha (Gaelic for aspen), and ecologist Joe Greenless from another local social enterprise, Starling Learning, planted some trees at an abandoned barytes mine in Scotland's largest regional park.

At over 28,000 hectares, the Clyde Muirshiel Regional Park spans Renfrewshire, North Ayrshire and Inverclyde. This sizeable chunk of open land contains one of Scotland's most accessible Wild Land Areas: Area 4 Waterhead Moor - Muirshiel. The symbol of the project - the Yearn Stane (or Eagle Stone) - is a four-tonne boulder in the very heart of the project area.

The Yearn Stane team is working with the local community and landowners to plant trees and restore the park's badly degraded peatlands and increase its biodiversity.

"It is not unusual to sit on a hill here for three hours or more and not see another living thing," commented Joe Greenless, who has worked in this landscape for 20 years. "The aim of the Yearn Stane project is to bring together a diverse group of people from the local area and get them all working together towards a common goal which will benefit everyone."

Editor's note: read more about this project in the autumn Journal.

Trust sponsors mountain literature inclusion event

The recent Kendal Mountain Literature Festival featured a Trust-supported event - Open Mountain: Inclusion and Connection.

Poet and writer Polly Atkin chaired a panel discussion on how class, gender, sexuality, race, income and disability can all exclude people from mountain literature and culture.

"It is 100 per cent untrue that there aren't diverse writers already writing on these areas and issues," she commented. "However, it is true that they are still not being recognised, heard and received as part of the mainstream."

"The best thing someone can do to raise the profile and voice of an under-represented writer is to step aside, and hand over the platform to the voices we need to hear."

The audience also heard performance prose and poetry from writers Anita Sethi and Kate Davis, as well as five new voices found through an open call out.



PHOTOGRAPH: KENDAL MOUNTAIN LITERATURE FESTIVAL

The Open Mountain event at Kendal

Grouse moor reform

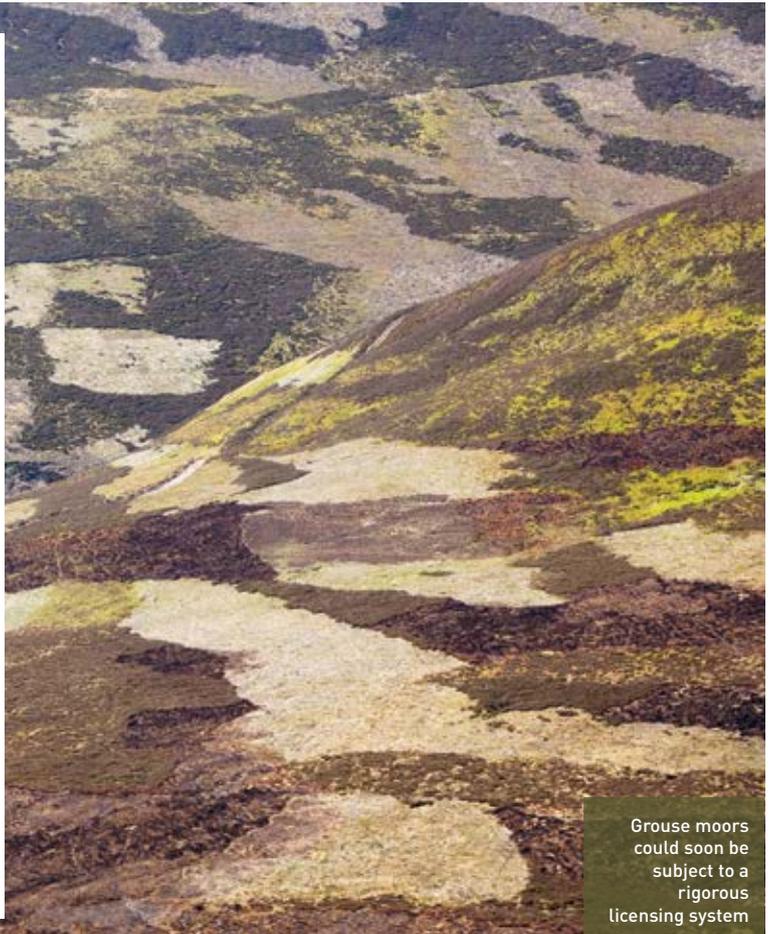
The Werritty Report, which was commissioned by the Scottish Government in response to growing concern over raptor persecution around driven grouse moors, has recommended that, should the industry fail to put its own house in order, a rigorous licensing system be put in place by 2025.

The new system would remove the right of landowners to shoot grouse where there is evidence of illegal killing of birds of prey. The review also proposes tightened regulation over muirburn, the use of medicated grit and the culling of mountain hares.

Duncan Orr-Ewing, Head of Species and Land Management at RSPB Scotland, commended the work of Professor Werritty and his review team “for pulling together such a significant volume of scientific evidence”.

However, he expressed concern at the lack of urgency on the key recommendation. “The illegal killing of Scotland’s birds of prey simply has to stop,” he said. “Those perpetrating these criminal acts have shown no willingness over decades to change their criminal behaviours. Letting this issue languish for another half decade will not help.”

The Trust, which has separately highlighted the damaging visual and ecological impact that can be caused by vehicle hill tracks for the purpose of driven grouse moor management, supports the call by RSPB to scrap the five-year delay and move towards a new licensing system as soon as practically possible.



Grouse moors could soon be subject to a rigorous licensing system

PHOTOGRAPH: PETER CAIRNS

Obituary: Graham White

Graham was a passionate early supporter of the John Muir Trust, a community activist, campaigner and environmentalist.

He first learned about John Muir’s work and reputation when travelling in the United States. On his return, and at a time when few in the UK had even heard of Muir, he worked to make Muir’s vision relevant and accessible to all.

Graham’s enthusiasm was put to use by the Trust’s Information and Education committee in the early 1990s. With Trustee Ben Tindall, Graham put together a proposal and raised funds to explore the need for a new kind of environmental award. His articulate and persuasive nature convinced Scottish Natural Heritage to back a feasibility study and pilot project. I was fortunate to be appointed to do this and to get to know Graham well, working alongside him at the Environment Centre he established in Edinburgh.

Graham continued to support the John Muir Award’s growth as part of its initial steering group, providing office space and continuing to offer ideas, energy and counsel when requested.

He took immense pride in seeing the Trust’s initiative develop and flourish over subsequent years.

A skilled writer and photographer, Graham co-authored *The Nature of Scotland* together with Magnus Magnusson. He also wrote the foreword to several reprints of Muir’s books.

His last campaign was a global effort to publicise and ban the use of neonicotinoids that has so decimated the honey-bee population in many parts of the world. Graham’s vision and passion for the natural world, his ability to enthuse everyone he met and his humour will be greatly missed.

Dave Picken



PHOTOGRAPH: BEN TINDALL

Eight to benefit from this year's Rubens Wallace Grant

The 2020 Des Rubens and Bill Wallace Grant will help eight people seek out life-changing experiences in wild places, in ways that will benefit them and the wild places they visit.

The recipients are:

- Kathryn Pender, a Glasgow artist, will walk the 370km Cape Wrath trail solo
- Kayleigh Reid, an Edinburgh High School student, will travel to Tanzania to support community projects
- Caroline Milson, a Sheffield student, will travel to the Democratic Republic of Congo to help efforts to reduce poaching
- Writer Yvonne Reddick will hike in Glen Affric and spend a week planting native trees with Trees for Life
- Will Rowland from Fort William will climb a previously unclimbed ridge in Greenland as part of a three-day expedition
- Cameron Goodhead from Exeter will travel to the Bornean rainforest to conduct research on orangutans
- Sophie Zych-Watson, (pictured), an Edinburgh student, will hike New Zealand’s remote trails gathering data on the gender breakdown of hikers she comes across
- Helen Fergusson, a Glasgow student, will gather coral reef data in Thailand to improve dive site management.





PHOTOGRAPH: KEVIN LLELAND

Muirburn on a grouse moor

Collective call to ban burning on peatlands

The Trust is one of several organisations that has signed up to a letter from Scottish Environment LINK to Roseanna Cunningham, Scotland's Cabinet Secretary for the Environment, Climate Change and Land Reform, calling on the government to ban burning on peatlands and introduce additional safeguards against fires spreading into peatlands.

Muirburn is a well-established practice

that takes place over a range of soil types. The risks, however, include the potential for vegetation fires to spread into the peat itself, causing damage and degradation and releasing carbon into the atmosphere.

The Muirburn Code states that burning should not take place on peatlands (defined as areas of peat deeper than 50cm). This part of the code, however, is only advisory.

Legal case in Wales challenges wind farm loophole

There is an increasing tendency for wind farm developers to apply for a scheme and then, once approved, submit a 'variation' to change the original permission. Often, this is to increase the size of the turbines. Such a tactic reduces the planning barrier, as the variation application is not subject to the same planning processes as the original scheme.

One recent case in Wales has successfully challenged this legal loophole. The wind turbine development concerned overlooks the scenic Teifi Valley in southwest Wales – a sensitive upland area of great conservation importance. The initial application for two 100m high turbines with a rotor diameter of 71m was approved, narrowly, by Carmarthenshire County Council. That decision was the outcome of balancing the renewable energy benefits of the scheme against landscape and environmental damage.

But just weeks after the application was approved, the developer submitted a request, under section 73 of the Town and Country Planning Act, to vary the permission to allow for a 25 per cent increase in turbine height (to 125m) and a 40 per cent increase of the rotor diameter (to 100m). The variation changed significantly the balance of factors considered in the decision on the original application, so was refused. However, the developer challenged the decision and, on appeal, the Welsh Government inspector approved the variation.

As many people believe that this is a misuse of Section 73, I appealed in the High Court against the decision but, again, the judge found in favour of the Welsh Government. Despite these setbacks, my legal team, led by Leigh Day, considered the law to be unclear. We took the case to the Court of Appeal where, in November 2019, the three judges found unanimously against the Welsh Government and quashed the inspector's decision.

Crucially, case law has now been established that prevents this misuse of planning laws by commercial developers. The judgment means that a "variation of condition" (a section 73 application) can only be used to vary conditions on an application, and not change the operative part of an approved application.

In principle, the decision does not apply in Scotland, but with the Supreme Court the ultimate legal authority in all UK cases, this outcome may well help prevent such a misuse of the planning system by wind farm – and other – developers UK-wide.

John Finney, John Muir Trust Trustee

News Briefs

Protecting Scotland's environment

A new Environment Strategy for Scotland has been welcomed by nature conservation charities, including the Trust. It promotes a sustainable, carbon-neutral economy, commits to embedding EU environmental principles into law, and pledges to establish an independent public body to oversee compliance with environmental legislation.

Remote communities

The Trust has responded to a consultation on a proposed Remote Rural Communities (Scotland) Bill for Scotland. This explores whether new legislation is required to address the problems facing remote rural communities. In addition to our Skye properties, four of the Trust's mainland properties (Sandwood, Quinag, Li and Coire Dhorrcail and Schiehallion) are also classified as 'Remote Rural'.

Rangering in Scotland

The Trust has submitted a written response to a Scottish Natural Heritage (SNH) consultation on rangering policy. Overall, we believe the future of rangering in Scotland is positive and SNH's policy reflects this belief. This year the Trust will launch its own Junior Ranger programme as we are keen to support the development of Scotland's future rangers.

Trust backs nature campaign

The Trust is backing the Scottish #iwill4nature campaign to ensure young people are empowered to take action for our planet. We have pledged to inspire 20,000 young people across Scotland to get involved in social action during 2020 by connecting with, enjoying and caring for wild places through the John Muir Award.



PHOTOGRAPH: JOHN MUIR AWARD

Pupils from Arran High School install a deer fence



Camping above
Sandwood Bay



National treasures

In this designated 'Year of Coasts and Waters,' **Lucy Wallace** explores the natural riches of Scotland's coastal environments – and the many challenges they face

THERE'S nothing quite like a visit to Sandwood Bay, a gloriously remote stretch of beach in the northwest Highlands, to highlight the special nature of our coasts. Wild, weather-beaten and soul-stirringly beautiful, it has become an essential stop on the hugely popular North Coast 500 tourist route – with the long walk in all part of the attraction.

But popularity has its downsides: while more people now experience the wonders of the Trust's most northerly property, the dune grassland, flower-rich machair and other important coastal habitats are vulnerable to human pressures.

“Some of these we don’t even realise contain plastic, such as sanitary items, cotton buds and wet wipes – even those advertised as flushable. They often end up on our beaches”

Cal Major, Paddle Against Plastic



PHOTOGRAPH: JAMES APPLETON

Cal Major uses her adventures to help deliver a powerful message about positive change

Seabird central: Scotland is known for its remarkable concentrations of seabirds, including guillemots



The problems of littering, camping amongst the fragile dunes and path erosion all cause headaches for those who look after the land.

“Unfortunately, not all visitors are responsible, with some leaving behind fire pits on the dunes and in the machair, and sometimes even abandoning cheap tents and camping equipment,” comments Carrie Weager, the Trust’s Sandwood Conservation Ranger.

While a big part of Carrie’s job is to help share the magic of Sandwood with visitors, another major part of her job is to clear up after them, with regular beach cleans to collect rubbish left by tourists and the tide.

Given the nature of the site, it’s not an easy task. “We have a problem getting rubbish off the more remote, rocky parts of the coast,” she explains. “These areas collect terrible amounts of debris that accumulates over years. Really, we’d need to use a boat to make any impact on it.”

PLASTIC PERIL

Some have been so touched by the extent of, specifically, plastic pollution on our beaches that they have made it their mission to inspire positive change. One such campaigner is paddleboarder and marine conservationist Cal Major who was so shocked at the amount of plastic she saw on the beaches during a visit to the island of Tiree that she founded Paddle Against Plastic.

A campaign group with a difference, it sees Cal use long-distance stand-up paddleboarding adventures to capture peoples’ imaginations, highlight the issue of plastic pollution close to home and inspire positive environmental change.

It all began with a 300-mile paddle around the coast of Cornwall, encouraging people met along the way to use refillable water bottles. There then followed a circumnavigation of Skye to demonstrate that more remote places are equally vulnerable to plastic pollution, before Cal undertook her biggest journey yet: a world first, 1,000-mile paddle from Land’s End to John O’Groats, again highlighting positive actions to tackle plastic pollution.

“Every single day in the UK around 38.5 million single-use

plastic bottles are used, a lot of them water bottles – despite us having the luxury of clean, safe and abundant tap water,” says Cal. “This is one of the more frustrating single-use items for me, as plastic water bottles are so obsolete.”

Of course, it’s not just plastic water bottles that are a problem – sewage-related debris also washes up when plastic items are flushed down the toilet. “Some of these we don’t even realise contain plastic, such as sanitary items, cotton buds and wet wipes – even those advertised as flushable. They often end up on our beaches and in our waterways.”

Cal is upbeat, however; she wants us all to make changes where we can. “Every action we take to refuse unnecessary single-use plastic is a win. Talking about it and making changes in our own lives is the first step, even if they seem small. Adding our voices to the millions of other people around the planet who care about this issue will help put pressure on the companies and governments that are able to make even bigger change.”

Already there have been tangible victories. The UK is moving towards a deposit return scheme on drinks cans and bottles, with Scotland set to be the first to implement the initiative in 2021.

SEABIRD CITIES

Scotland’s coastline is extraordinary for many reasons, not least because it is home to a vast assemblage of seabirds, including internationally important colonies of guillemot, razorbill, northern gannet and Manx shearwater.

Many colonies have declined considerably in recent decades, although with seabirds so long-lived – anywhere between 20 and 60 years depending on species – it can be hard to quantify which problems impact them the hardest.

Globally, the biggest threats include bycatch (when birds are accidentally caught by fishing nets and hooks), invasive species, climate change and overfishing. “Of these, climate change and invasive species are probably the greatest threats to seabirds in Scotland,” says Dr Nina O’Hanlon, a seabird ecologist at the Environmental Research Institute, UHI.

One major concern is that as seas warm, so the availability of

Freshwater challenges

The health of our coastal waters is intimately connected with the health of our river systems, with whatever finds its way into freshwater inevitably also making its way to the sea. So, when nitrates and other pollutants from agriculture and industry contaminate aquatic systems, or when heavy rain sees untreated sewage swept into rivers, it is both the salt and freshwater environments that suffer.

And there are other challenges too – not least the proliferation of invasive non-native species. Aquatic plants such as New Zealand pygmyweed shade out native species; American signal crayfish damage riverbanks with their burrowing; while invasive fish species alter the overall composition of aquatic fauna, often outcompeting native species.

“It’s not just plants, crustaceans and fish,” explains Dr Shona Marshall from the West Sutherland Fisheries Trust.

“American mink is the main invasive mammal impacting on freshwaters. A fierce predator, the animals reduce biodiversity and can even result in the local extinction of some native species.”

Rivers also mean power in Scotland, although the hydro schemes that generate vital energy create barriers for migratory species such as salmon and trout. “Hydro schemes are a big issue in some rivers, with water moved around, rivers allowed to completely dry out and barriers to fish movement created,” explains Shona.

Efforts are made to reduce the negative impacts of such schemes, however. “On the River Conon, SSE invests in measures to mitigate the impact on salmon populations.”

The good news for Scotland’s rivers is that there has been a marked

improvement in water quality in recent decades, with the result that salmon have made a welcome return to major rivers such as the Clyde.

“Our freshwater systems are such a vital part of the landscape both in terms of human health and the biodiversity of the area,” says Shona. “Despite numerous challenges, our rivers can and do bounce back with a little help.”



prey items changes – with some seabirds particularly hard hit. The UK holds 8 per cent of the world’s black-legged kittiwake population but some colonies are crashing; the species has seen an 87 per cent decline in Orkney and Shetland and a 96 per cent decline on St Kilda since 2000.

“It’s all about the changing distributions of prey species, and whether suitable size prey is available when seabirds need food the most – when they are rearing chicks,” explains Nina. “Lack of good-sized sandeels seems to be a key issue for many species, including kittiwakes”

Seabirds deal with multiple pressure points, the easing of which may help them to adapt to the impacts of a changing climate. Local solutions such as restricting sandeel fisheries during the seabird breeding season, and efforts to remove invasive predators such as rats and mink that can decimate colonies could be crucial steps.

Other problems are visible but harder to quantify. “Plastic is a difficult one as it is obviously an issue, but it isn’t currently clear what impact plastic has on seabirds,” outlines Nina. “We know it affects individuals but at present there is no evidence for a negative impact at population levels.

“However, given how long-lived seabirds are anything that adversely affects adult survival is not a good thing and therefore plastic pollution may further impact populations that are already declining due to other issues.”

Like so many species, plastic causes problems for seabirds through both ingestion and entanglement. “Gannets are an obvious example in Scotland as we can see the presence of plastic in nests. Much of the debris incorporated is net or rope, which is more likely to cause entanglement.”

ABOVE AND BELOW

Of course, climate change isn’t just a problem for seabirds; it will also see coastlines radically reshaped over the coming decades as sea levels rise and our coasts bear the brunt of increasing numbers of violent storms.

As the UK works to lower its carbon emissions, including an increased focus on natural solutions, one specific marine

ecosystem could well prove to be a valuable ally. Around the world, out of sight in shallow, sheltered areas, seagrasses grow in aquatic meadows of flowering plants. Much like coral reefs and rainforest ecosystems, these underwater gardens are full of life.

In the UK, a species called eelgrass brings multiple benefits: it serves as an important nursery habitat for a range of commercially important fish; it helps stabilise our coasts, so protecting them from the impact of storms; and serves as a natural carbon sink, capturing carbon at a rate even greater than that of tropical forests.

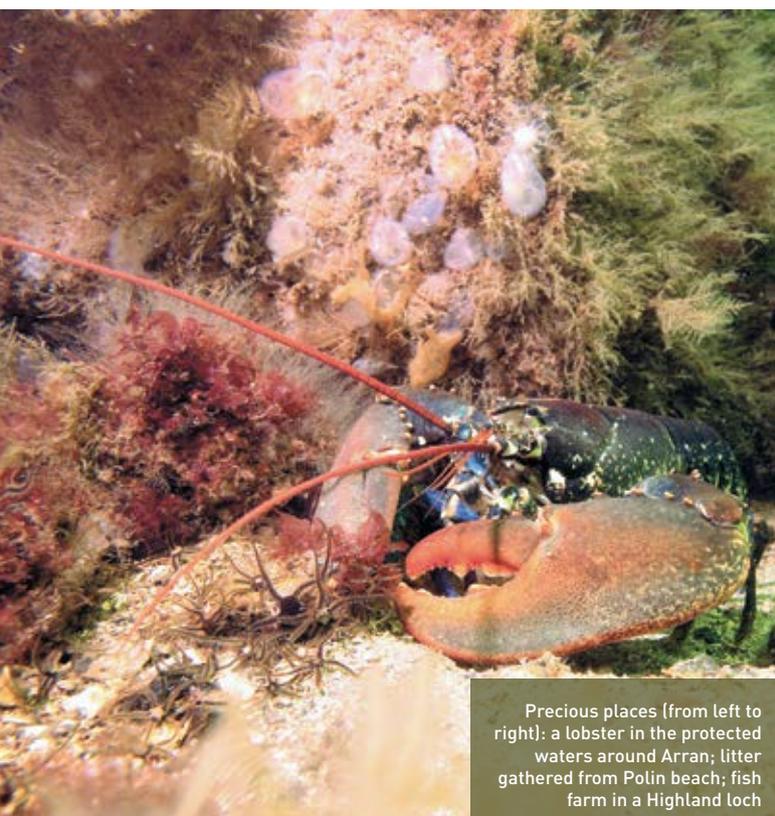
At the frontline of protecting and restoring such valuable habitat is Project Seagrass, an environmental charity that works to map and restore seagrass meadows around the UK, including through a pioneering planting project in Wales.

The effectiveness of eelgrass in storing carbon is staggering. “In the UK, average reported organic carbon values are at 3,372 grammes of carbon per m² (averaged over 13 beds),” explains project director Dr Richard Lilley. “Comparable figures from elsewhere in the north-east Atlantic have reported average organic carbon values from 627 grammes of carbon per m² in Finland (over 10 beds) to almost seven times more in Denmark (over 10 beds) at 4,324 grammes of carbon per m².”

As Richard explains, this Danish figure is approaching double the carbon sequestration rate of a terrestrial conifer forest in Scotland. “What we do know from the science so far is that hydrodynamics are everything when choosing sites for planting,” he says. “One UK site reported organic carbon values of 8,000 grammes of carbon per m²! This means that when it comes to focusing efforts, and especially for planting, it’s important to understand how seagrass behaves. Mapping it is an essential part of that research.”

If planted in appropriate locations, seagrass meadows would not only have the potential to sequester significant amounts of carbon, but also provide a nursery habitat that would be hugely beneficial for local fisheries and generally enhance biodiversity.

“In Scotland we hope to build on and expand the work we have been doing with mapping seagrass meadows and indeed



Precious places (from left to right): a lobster in the protected waters around Arran; litter gathered from Polin beach; fish farm in a Highland loch

PHOTOGRAPH: HOWARD WOOD/COAST



restoring them like we have already done in Wales," adds Richard.

The Scottish Government lists seagrass meadows as one of 81 Priority Marine Features that are deemed to be characteristic of the Scottish marine environment. They are now protected by a network of 231 Marine Protected Areas (MPAs) – the majority of which are sites for nature conservation – that currently cover around 22 per cent of Scottish coastal waters.

However, despite legal designation by the Scottish Government, not all MPAs have management plans in place. One example is the Small Isles MPA, which is home to Scotland's only aggregation of fan mussels. Although created in 2014, lack of agreement among stakeholders means that a management plan has yet to be developed. As a result, it remains legal for trawlers to dredge the site, potentially at great cost to marine life on the seabed.

"The area is one of the absolute jewels of Scotland's seabed crown ... management proposals have been on the table for the last six years, but all we are seeing is further degradation of seabed habitats," comments Nick Underdown from the Open Seas Trust, which campaigns for sustainable alternatives to damaging fishing practices.

Open Seas is also resolute that the pockets of protection delivered by MPAs are just not enough. "To address the climate crisis and rebuild our fish populations, we need to significantly reduce the footprint of scallop dredging and prawn trawling in the coastal zone of Scotland," says Nick. "We believe that, overall, this would be a win-win for the fishing industry and the environment."

Part of the problem, he adds, is that the Scottish Government could do much more to plan for the long-term resilience of our inshore fisheries. "The question is how do we transition away from unsustainable fisheries in a fair way that doesn't put people out of jobs? That social dimension to the problem needs to be addressed, and that will need investment."

Properly managed, however, MPAs work – as demonstrated by Scotland's only community-led example, the South Arran MPA. Almost three decades ago, local divers who saw the damage caused by destructive fishing methods in Lamlash Bay set up the Community of Arran Seabed Trust (COAST) to campaign for

better protection. And the community quickly came on board. COAST was instrumental in setting up Scotland's first ever No Take Zone (NTZ) in 2008 – a tiny area in the north of the bay. Here, wildlife is protected from all forms of fishing, not just dredging and trawling. It has since seen dramatic improvements in biodiversity, as well as the quantity and size of commercially important species such as lobsters and scallops.

"Every year crustacean surveys are conducted in the NTZ, record-breaking sized lobsters are recorded," reports Jenny Stark, Outreach and Communications Manager for COAST. "Fishermen are reaping the benefits of the NTZ, as abundance of lobsters is so high that they are spilling over into accessible fishing grounds."

And this was only the beginning. The 280 km² South Arran MPA came into being in 2014, although the Scottish Government didn't adopt a management plan until two years later. Previously, the area was subject to regular dredging and bottom trawling from fishing vessels hunting for prawns and scallops.

A study by the University of York has shown that, in less than four years, king scallop densities have increased six-fold. "COAST and the Isle of Arran community's success has been underpinned by 10 years of science," explains Jenny. "There is clear evidence that marine biodiversity is improving in the protected areas. The growth of structurally complex nursery habitats and key blue carbon habitats are showing particular recovery, which in turn supports the recovery of commercially important stocks."

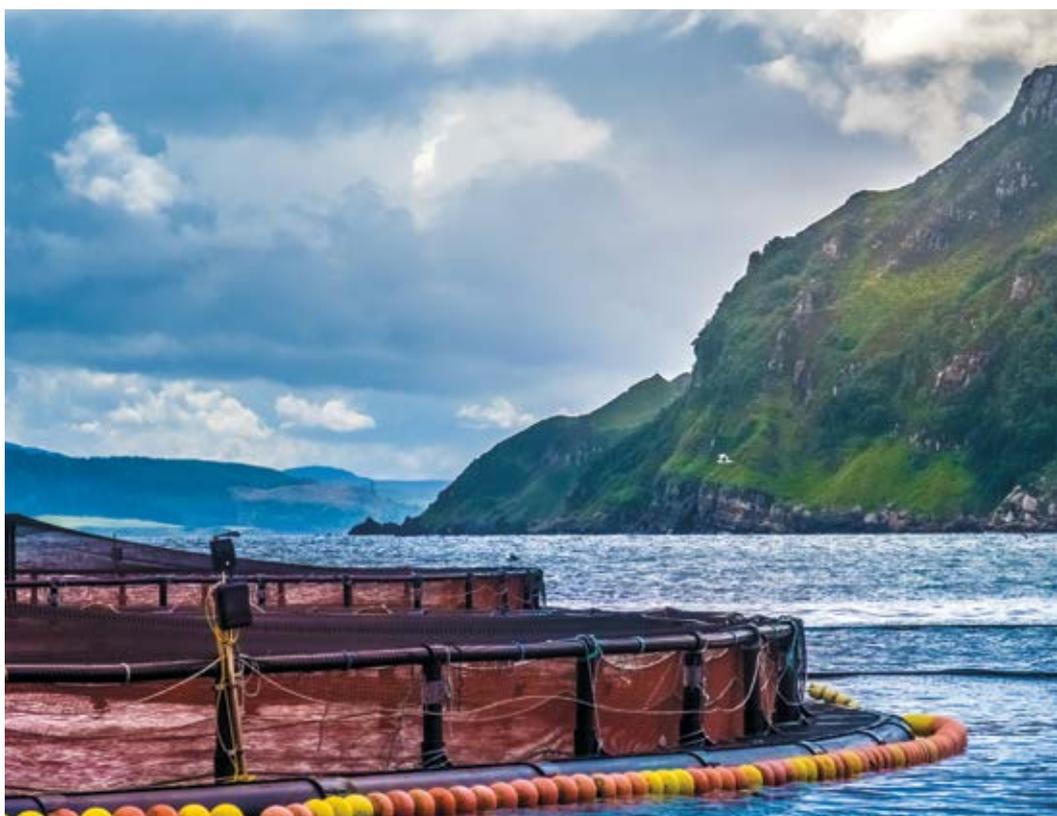
These days COAST does as much outreach and educational work as actual lobbying but retains a powerful voice. Its success serves as a model for communities around the country, believes Jenny. "The message," she says, "is that any environment can benefit from better protection, and every community has the right to a better environment if they want one. If that is embraced on a global scale, then there will truly be a sea change in the health of our seas."

FISH FARMING

If unsustainable fishing methods cause environmental damage, what place then for fish farming? Today, the industry employs more



PHOTOGRAPH: CARRIE WEAGER



than 2,000 workers in Scotland, often in remote communities, with farmed salmon one of the UK's top food exports.

For some, salmon farms detract from the character of wild coastlines, but does this matter when set against such economic benefits? It certainly does for the inhabitants of the isle of Eigg in the Small Isles. Famous for renewable energy and a spirited independence, the island has long served as a flagship for community ownership following a buyout in 1997.

Since then, self-determination and self-sufficiency have both flourished. During a ballot in 2019, 87 per cent of islanders voted to reject plans for a fish farm off the north of the island despite the promise of jobs from the developer, MOWI.

It might seem a surprise that a remote community that stands to benefit from job creation would come out against such a development, but not on Eigg. "Most folk who live here are environmentally aware and well informed," explains Maggie Fyffe from the Isle of Eigg Heritage Trust. "The opposition was very much based on environmental concerns. MOWI has since withdrawn the application."

The environmental concerns about fish farms are wide ranging. Open cages result in a rain of uneaten food and faeces settling on the seabed. Chemicals are involved too, with farmed fish treated against disease and lice infestations. There can also be a negative effect on other wildlife; acoustic deterrents are used on seals, and if this doesn't work the animals are shot.

Meanwhile, disease from farmed fish can spread to wild salmon and trout – a disaster for already dwindling populations – with the added problem that farmed escapees further weaken the gene pool of wild fish.

The Eigg islanders are resolute. "Other salmon producers may come along but as a community we've agreed to oppose any such approaches for the foreseeable future," confirms Maggie.

The coast is vitally important to local people on the island. "You can see the sea from virtually anywhere on Eigg – it's a big attraction for me," adds Maggie. "Residents and visitors are here because of the wildlife, and very much appreciate the island's unspoilt nature."

Locals do use the sea for economic gain, but only on a small scale. "No-one on Eigg currently fishes commercially but there is fishing for home consumption or to supply local restaurants. Also, one or two still pick whelks for extra income, we have the early stages of an oyster farm and someone is currently looking into small-scale processing of seaweed."

While government sometimes appears behind the curve, communities such as those on Eigg and Arran are standing up and demanding to be recognised as stakeholders in their own coastal management.

Individuals can also make a difference, as single actions taken together become a movement for change. By doing something as small as refusing a piece of single-use plastic, to bigger decisions such as changing eating habits or organising a beach clean, it is possible for people to work together to persuade corporations and politicians that the health of coastal environments matters to people as well as wildlife.

Cal Major at Paddle Against Plastics is characteristically optimistic: "There is so much more awareness now, and all victories no matter how small can and do make a positive difference," she says. "People are really making their voices heard." □

Get involved

- Join a work party at Sandwood Bay, johnmuirtrust.org/support-us/volunteer
- Join the Paddle Against Plastic community, paddleagainstoplastic.com
- Help map seagrass meadows around Scotland, seagrassspotter.org
- Learn about marine conservation on Arran, arrancoast.com

About the author
Lucy Wallace is an outdoors writer and mountain guide based on the Isle of Arran

All at sea

Although such findings are always sad, the marine life discovered washed up on our beaches reveals much about the health of our seas, as **Carrie Weager** explains

THE waters around Scotland's almost 19,000kms of coastline are home to an extraordinary diversity of life, both above and below the waves. With more than 20 species of cetacean (whales, dolphins and porpoises), a third of the world's population of grey seals and a vast array of fish – including 25 species of sharks, skates and rays – it's quite a roll call.

Few will forget an encounter with a pod of killer whales or a basking shark, while more occasional visitors to our waters include marine turtles and the giant sunfish. The extensive coastline also supports more than 40 per cent of the EU's population of breeding seabirds.

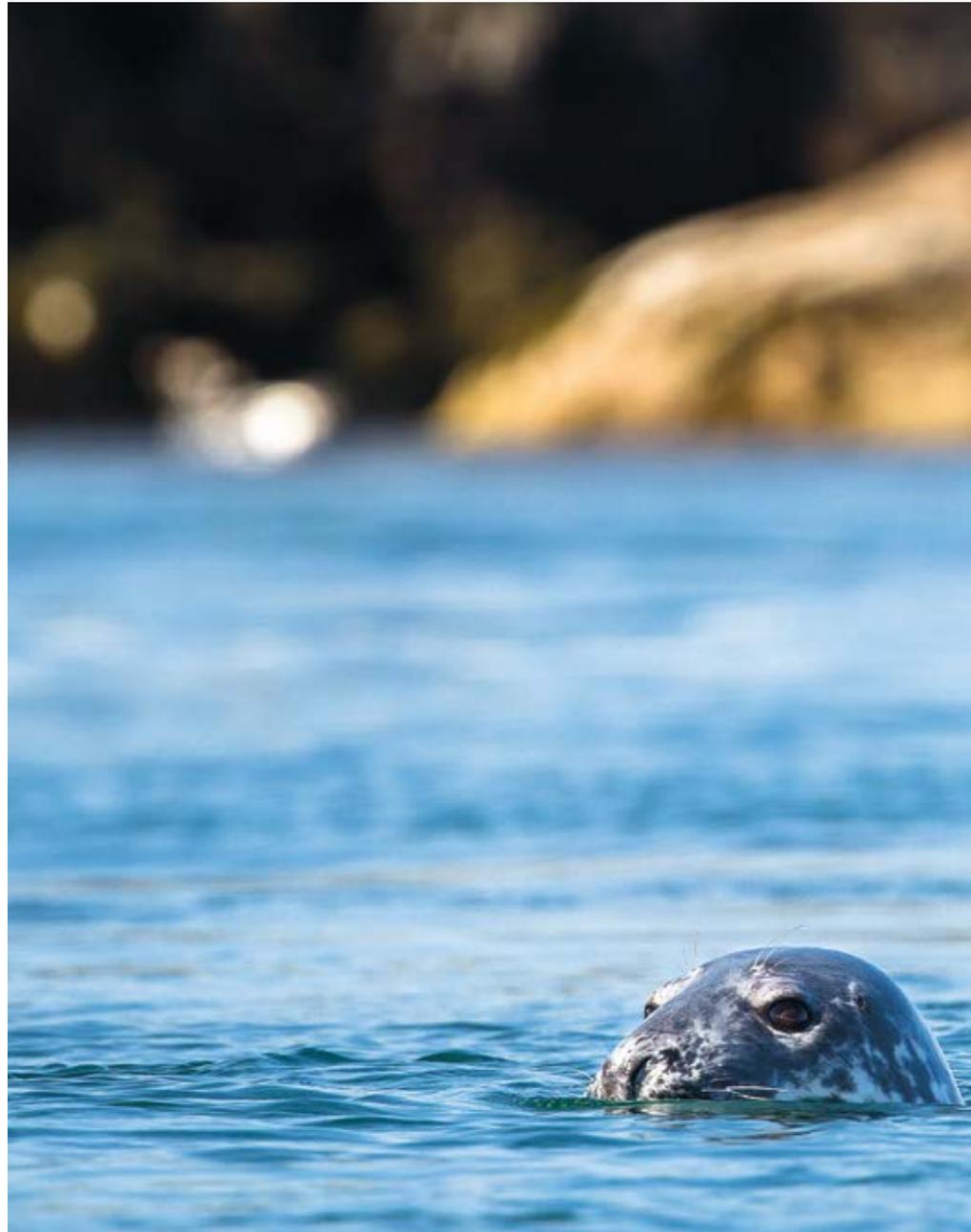
The fact that there is so much life here is all about habitat. The waters off the west coast offer a particularly rich diversity, from towering sea cliffs and rocky shores to sheltered bays, fjord-like sea lochs and extensive stretches of sandy beach – as found at the Trust's Sandwood property. And it doesn't stop at the water's edge. The seabed itself, with its mix of coarse sands, gravel and rock provides a foundation for cold-water coral reefs, burrowed mud, kelp forests and ancient maerl beds.

Such vibrant habitats provide important spawning grounds for a variety of fish, while western coastal waters not only serve as migration routes for many species of cetacean but are also vital feeding and breeding grounds.

Given their importance, the Scottish Government has established a network of Marine Protected Areas to safeguard key inshore and offshore sites. To date, they cover approximately 22 per cent of Scottish waters and include sites for nature conservation, protection of biodiversity and demonstration sites for sustainable management practices.

HEALTH CHECK

A healthy and productive marine environment is essential not only for the creatures that live there but also for the physical, mental and economic wellbeing of humans – particularly those living in coastal communities. Sadly, however, the pressures facing marine ecosystems are as varied as the marine life itself, while the overarching threat posed by a changing



climate only serves to exert further pressure (for more, see our lead feature on p10).

Although tinged with sadness, the discovery of marine life washed up on our shores can provide valuable information on the health of the marine environment. Vital details such as age, sex, body condition, diet, pollutant levels, reproductive status, and disease and parasite burdens can all be collected from carcasses. Such data enables pathologists to establish the likely cause of death, as well as assess pressures and threats, population dynamics and responses to environmental changes.

Since 1992, the collection and analysis of this data has been undertaken by the Scottish Marine Animal Stranding Scheme (SMASS). Working alongside more than

200 volunteers across Scotland – including myself and Sandwood manager, Don O'Driscoll – the SMASS team collects biometric details, tissue samples and even whole animals for necropsy.

Since SMASS first began collecting data, a variety of marine mammals have been found washed up on and around the Trust's Sandwood estate. As well as numerous seals, discoveries have included three species of beaked whale (Cuvier's beaked whale, northern bottlenose and Sowerby's beaked whale), five species of dolphin (long-finned pilot whale, Risso's dolphin, white-beaked dolphin, short-beaked common dolphin and killer whale), while carcasses of sperm whale, minke whale and harbour porpoises have also been reported.

The reasons for animals washing up on

Scotland's coastal waters are full of life, including a third of the world's population of grey seals

Detective work



PHOTOGRAPH: SMASS

Occasionally, so-called Unusual Mortality Events (UMEs) occur that require further investigation by the Scottish Marine Animal Stranding Scheme (SMASS). In 2018, one of the largest UMEs ever recorded took place when nearly 100 beaked whales – mainly Cuvier's beaked whales – washed up around the Atlantic coastline of the UK and Ireland between August and October.

A little-understood pelagic species, Cuvier's beaked whales are capable of diving to depths of up to two kilometres. The concentrated time frame of the strandings plus the animals' relative state of decomposition led SMASS to believe that death from natural causes was highly unlikely.

Cuvier's appear to be particularly sensitive to noise disturbance, especially the kind of mid-range sonar used by the military. Such noise can disrupt diving behaviour, leading ultimately to decompression sickness and death.

Sadly, there has been a further recent spate of beaked whale strandings around the southern Irish sea. Investigations into these deaths are ongoing.

“The collection of tissue samples from stranded animals allows for the analysis of the effects of pollutants that continue to persist in the marine environment”

our beaches are many. Specific anthropogenic threats to cetaceans and seals include entanglement, by-catch, collisions with vessels, noise pollution and disturbance, plus chemical pollution.

STORED TOXINS

The collection of tissue samples from stranded animals allows for the analysis of the effects of pollutants that continue to persist in the marine environment. Long-lived odontocetes – toothed whales that feed high up in the food web – are at particular risk from persistent and

bio-accumulative toxins such as polychlorinated biphenyls (PCBs), which build up in fat-rich tissues such as blubber. At high levels, these compounds impair immune function, disrupt reproduction and damage overall health.

These stored toxins are often mobilised when energy reserves are most needed, such as during times of environmental stress, pregnancy and lactation. This has been shown to be the case in harbour porpoises in the UK, where juveniles are exposed to a potent mixture of neurotoxins through their mother's milk

– a developmental stage where such toxins can cause the most harm.

The West Coast Community of killer whales – the only year-round resident population in UK waters – is another to suffer from the devastating effects of PCB contamination. Analysis on a 20-year-old female that died following entanglement in creel ropes and subsequently stranded on Tiree in 2016 revealed a PCB level of 957mg/kg, one of the highest levels of contamination ever recorded.

To put this into perspective, damage to health can occur at only 11mg/kg. Killer whales in the northeast Atlantic show an average of 150mg/kg. Research predicts that half of the world's population of killer whales are at risk of dying out due to PCB contamination.

The West Coast Community prey on

marine mammals rather than fish, which could explain why it exhibits such extraordinarily high PCB burdens. This population is now doomed to extinction, with only two individuals, both male, seen since 2016. The disappearance of a community that is genetically, behaviourally and phenotypically distinct from others in the north Atlantic, such as the Norway and Icelandic populations that have frequently been seen around the Northern Isles in summer, will be a sad loss.

MARINE LITTER

Of course, it's not just about pollutant levels in our waters. In November 2019, the well-documented issue of marine litter was again brought into sharp focus when a sub-adult male sperm whale was found to have approximately 100kg of marine debris in its stomach. This unwelcome diet included bundles of old rope, sections of net, plastic bags, gloves, cups, packing straps and tubing.

Anger is an understandable first reaction to such a story, with considerable ire often directed towards the fishing sector. But damaged and lost gear is also undesirable for the fishing industry: as well as financial implications, snagging on so-called 'ghost gear' – fishing gear that has been lost, abandoned or discarded – can also be a danger to fishing vessels.

Aware of its responsibilities, the fishing industry is working on collaborative solutions. The Scottish Entanglement Alliance, a research programme involving industry representatives, researchers (including SMASS) and conservation charities, is looking to gain a better understanding of the scale and impact of entanglements.

Meanwhile, the Fishing for Litter scheme, established by KIMO (Municipalities for Sustainable Seas), aims to reduce the amount of marine debris and ghost gear in our seas by providing boats and harbours with facilities to dispose of litter brought up in fishing nets.

Overall, the number of strandings has increased year-on-year over the past decade, although this is likely due to greater awareness and reporting by members of the public than any increase in mortality. What is clear is that public awareness is vital, as every piece of data improves our understanding of the challenges facing our seas – and how best to address them. □

About the author
Carrie Weager is the Trust's
Sandwood Conservation Ranger



Life and death (clockwise from main): a killer whale washed up at Sandwood Bay; measuring a decomposing whale carcass; killer whale pod

PHOTOGRAPH: DOIN O'DRISCOLL



PHOTOGRAPH: DOIN O'DRISCOLL

Get involved in recording valuable data around our coastline

Here's how you can help:

- Report dead-stranded marine mammals to SMASS by emailing strandings@sruc.ac.uk, or calling/texting **07979 245893** or **01463 243030**. Try to provide the following details: date found; location (with grid ref if possible); photographs; species/description; estimated length of carcass; general condition of the animal; your contact details
- Join a beach clean or remove as much litter as possible while out walking. The Beach Track app can be used to find the beaches most in need of attention. Details of beach cleans at Sandwood, plus other volunteer work parties, can be found on the Trust's website.

- Report live-stranded marine mammals to the SSPCA Animal Helpline on **03000 999 999**, or the British Divers Marine Life Rescue on **01825 765546**

- Download and use the SMASS Beach Track app to submit reports of stranded marine animals and birds, and to upload survey tracks and observations about marine litter. This contributes to a database that provides an overall picture of the health of Scotland's beaches. beachtrack.org



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4. 15ml of Cassis.
5. Top with Fever Tree Tonic.
6. Garnish with 1 wedge of fresh lemon.

www.benlomondgin.com

Swim and tonic

Never one to knowingly pass a body of water without at least considering jumping in, **Helen Mason** reveals more about her passion for outdoor swimming



PHOTOGRAPH: HELEN MASON



I HAVE long been drawn to water. Ask my friends and family what it is like to spend time outdoors with me and they will probably recall an occasion when I tried (successfully or otherwise) to entice them into some form of wild swim. I was brought up a reluctant walker (at first), but with more than 40,000 lakes and almost 8,000 miles of coastline in mainland UK alone, it is perhaps no surprise that I was eventually drawn into the water rather than simply walking alongside it.

The combination of stifling air at the local swimming pool and the constant need to keep an eye out for the ever-looming tiled end of the pool soon put me off indoor swimming. I much preferred to feel the soft ground between my toes and the breeze on my face. And given that this is the UK, this inevitably meant getting used to the feeling of cold water on my skin. It's for good reason that my definition of a 'swim' is a minimum of 30 strokes and getting my head under ...

In her seminal mountain memoir, *The Living Mountain*, Nan Shepherd writes of how plunging into a cold Cairngorm pool 'seems for a brief moment to disintegrate the very self; it is not to be borne: one is lost, stricken, annihilated. Then life pours back.'

I feel exactly the same: the nervous anticipation before a cold-water swim, the shudder-inducing first contact with the cold water, the shock of complete immersion and then the euphoria of having lived to tell the tale – I find all of it invigorating and addictive. Getting in almost always seems daunting, but as a family friend asked: "When have you ever

regretted getting in the water?"

The physical benefits of cold-water swimming are well documented and there is a shock-to-the-system, shake-you-out-of-a-funk type of mental invigoration that, for me, only a freezing dip (and the inevitable choice language that accompanies it) can provide. As adventurer and author Alastair Humphreys writes, wild swimming is 'the simplest antidote I know to impending depression, stress, or taking yourself too seriously.'

This simplicity of quite literally immersing myself in wild places is to my mind what makes wild swimming the perfect way to experience them. As Roger Deakin writes in *Waterlog: A Swimmer's Journey Through Britain*: 'You are in nature, part and parcel of it, in a far more complete and intense way than on dry land.'

I feel at first-hand the power of nature when the pull of a river's course carries me along, or sea waves push me over as though I am nothing more than a pebble. It's possible to feel the textures of different places: grainy sand dragged from under the soles of the feet by busy currents on a beach; toes sinking into cool riverbed mud; or bracing against sharp, loch-side stones.

There is also a raw sense of the natural rhythm of a place: the changing seasons, the rising and setting sun, the turning tides.

And no two swims are the same, even when returning to the same location; I have shivered purple-and-pink post-swim at Oldshoremore Beach near Sandwood, hurriedly dressing with

nothing but a towel to protect me from the biting spring wind, but I've also air dried in the sun's warmth late on a perfect July evening in the very same place.

SLOW AND STEADY

I am no technical, long-distance swimmer. I lost the ability to swim even vaguely respectable front crawl years ago and now prefer breaststroke for its slower pace and how it allows me to enjoy the surrounding sights and sounds.

My one foray into the world of organised racing was a 3km jaunt in the River Thames at Marlow, which I swam almost entirely breaststroke – much to the dismay of the marshals. As elating as that achievement felt it also confirmed that the world of wetsuits, goggles and swimming caps was not for me. I'm more of a make-do-in-your-sports-bra-and-pants, using-your-scarf-as-a-towel-type of swimmer. Cheap, cheerful and chafe-free.

There is something in these small acts of rebellion – not swimming in the indoor pools or outdoor lidos where we are 'meant' to swim, and not wearing the proper gear that we are 'supposed' to wear – that feels wonderfully mutinous. It speaks of freedom and liberation.

In bypassing all the changing room admin and swimming pool infrastructure, I find there is a more direct connection with the water itself, with the willpower required to jump in the only barrier separating me from the water.

Once I've taken this leap, done my 30 strokes and got my head under, I often catch myself looking back to shore. Seeing



Swim films

As part of the Trust's involvement in a variety of film festivals, we've seen an increase in short films devoted to the subject of wild swimming. Here are three of our absolute favourites:

CHASING THE SUBLIME, Dir. Amanda Buglass (6.40'). A hauntingly beautiful glimpse at the physicality of UK cold-water swimming. <https://vimeo.com/292071219>

TONIC OF THE SEA, Dir. Jonathan Scott (8.16'). A mini-doc exploring the link between sea swimming and mental health. <https://vimeo.com/242196564>

BLUE HUE, Dir. Natasha Brooks (5.13'). How one swimmer uses outdoor swimming to connect with the natural world. <https://vimeo.com/134002940>



Deep breath (clockwise from main): swimming wild; the author enjoying mountain pool, sea and loch



PHOTOGRAPHS: HELEN MASON

land from the water can offer a new perspective on familiar landscapes – a feeling I had most recently during the Trust's staff gathering on Skye in 2019. We'd enjoyed wonderful views from the Sabhal Mòr Ostaig across to the Knoydart peninsula from the moment we arrived. But it was only until an after-dinner dip found me floating on gentle waves and looking over to the Knoydart hills as the evening light faded below a bank of cloud, that I thought: 'This is why the Trust does what it does.'

For many people, the joy of wild swimming is in the silence and solitude. I have welcomed many solo swims as decompression after a busy workday. After all, it's hard to beat the all-encompassing calm of swimming underwater. But in

revisiting some of my strongest wild swimming memories I also realise that wild swimming is mostly a way of connecting with others rather than finding time away from them.

Thinking back, I have sealed many a new friendship and cemented many an old one with a dip. You can't help but feel closer to someone once you've shared in the initial trepidation and subsequent elation that comes with wild swimming. I have flirted on a second date, jumping waves together in rough seas near Edinburgh, and floated in comfortable silence with a long-term partner in a warm river near Oxford. I have celebrated birthdays and marked career milestones. I find excitement in the shared vulnerability and find comfort in the safety and strength in numbers.

We often associate wildness with the high up and far away hills, our eyes raised towards the uppermost peaks, our feet moving steadily towards the furthest hill passes. But there is also something to be said for slowing down and sinking into the water to gain a fresh perspective on the power of nature and our place in it.

Recently, I stumbled across the Scots Gaelic word *Snàmhach*, which means, variously, floating or swimming naturally, being fond of swimming, or prone by nature to swim. It's an adjective perhaps originally meant to describe aquatic animals, but it might not be a bad idea to co-opt it for ourselves too. □

About the author
Helen Mason is the Trust's
Development Manager



Silent destruction

As politicians ponder the findings of a two-year review into deer management in Scotland, **Alan McCombes** reflects on the prospects for change

WHEN a Lincolnshire landowner wrote a book called *The Art of Deerstalking* after spending a few days scrambling across the Perthshire hills with a rifle in his hand, he could never have dreamed of the centuries-long impact it would have on the landscape, ecology, economy and demography of Scotland.

Part instruction manual and part sequence of light-hearted observations, it became a runaway best-seller following its publication in 1839. Among those inspired to take up the pastime was Prince Albert,

the consort of Queen Victoria. Before long, the ancient sport of kings and chieftains was back in fashion.

By this time, the sheep bonanza that had led to the Highland Clearances had collapsed under the weight of a monsoon of cheaper, better quality wool and mutton from the New World. It could have been an opportunity for soils, woodlands and ecosystems to revitalise, and for people to return to the glens. Instead, a new monoculture was imposed across vast swathes of the north.

When William Scrope published his book, there were 28 sporting estates in the north of Scotland. By the end of the century, there were 150, covering more than 1.2 million hectares. Land prices shot up, local people were prohibited from hunting deer for food, and grazing deer took over from sheep as the biggest menace to the vegetation of the uplands.

For the next century and a half, Scotland's red deer population multiplied relentlessly. By 1950 there were an estimated 100,000 in the Highlands.



A decade later, there were 150,000. Today, there are around 400,000.

The impact of that population explosion has been extreme. Hillsides that should be swathed in native woodlands and teeming with birds, insects, wildflowers and small mammals instead stand bare, silent and desolate. Glens that should have long since been repopulated having being emptied in past centuries remain eerily silent to this day.

In the Highlands today, 26,000 square kilometres of land – an area almost the size of Belgium – is managed primarily for red deer shooting for sport. It is not a profitable business: according to a report commissioned by the Association of Deer Management Groups in 2016, the industry makes a net loss of around £30 million and provides just 722 full-time equivalent jobs – fewer than one job per 30 square kilometres.

The geographical region of the Highlands and Islands is the most sparsely populated in Europe outside the northern

reaches of Scandinavia. Away from the coastline, much of the interior north of the Great Glen is virtually uninhabited. The entire area – from the Mull of Kintyre to Caithness and the islands of the north and west – has a lower population density by far than the Alps, the Carpathians, the Apennines, the Pyrenees and other mountainous regions of Europe. It has half the population density of Western Norway, an area comparable in size, climate and topography, where grazing pressures have been reduced and woodlands allowed to expand and thrive.

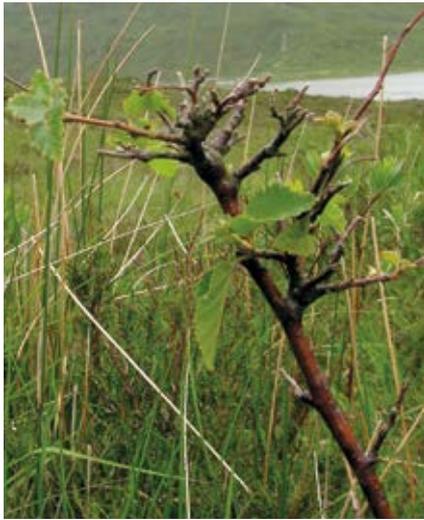
CULTURE CHANGE

Earlier this year, an independent Deer Working Group, appointed by the Scottish Government in 2017 to carry out the biggest review into deer management in Scotland for generations, published its findings in a 374-page report which sets out 99 recommendations to “safeguard public interests and promote the

sustainable management of wild deer”.

Although expressed in painstakingly measured, legalistic language, the report pulls no punches. It notes that even after 60 years of top-level deliberation over the destructive ecological impact of overgrazing, “deer are still causing significant levels of damage to protected areas designated for their natural heritage value”.

Challenging the culture that exalts sporting estates above all other forms of upland management, the report bluntly states that “there is no entitlement to shoot a certain number of deer on a particular property” and advises landowners to live with the reality that “neighbours may want to reduce deer densities on their land for forestry purposes”. It warns that the current system of self-appointed Deer Management Groups (DMGs) “could become a factor in slowing the delivery of public policy” and says it “knows of instances where undue



PHOTOGRAPH: JOHN MUIR TRUST

pressure has been brought to bear on members of DMGs who wish to reduce deer numbers on their land in order to deliver environmental benefits”.

Responding to the report, the Trust’s Head of Land Management, Mike Daniels, comments: “It is a forensic and convincing exposition of the history of deer mismanagement in Scotland and the inadequacies of the current system. Taken together, the 99 recommendations of the review group would amount to the wholesale rewriting of the Deer (Scotland) Act 1996 which is the primary legislation governing the deer sector.

“As the report illuminates, that Act is riddled with anomalies, inconsistencies and ambiguities which have hamstrung the official regulators. It also suggests that this lack of clarity is not just down to incompetence but also to the vested interests that set out to dilute and weaken the legislation as it made its way through the two chambers of Parliament in Westminster.”

The report explicitly states: “The Government had to bring forward amendments to its original proposals to satisfy the concerns of members of the House of Lords with deer stalking interests in Scotland. The result of the amendments in the 1996 Act to protect the natural heritage were particularly constrained compared to other interests.”

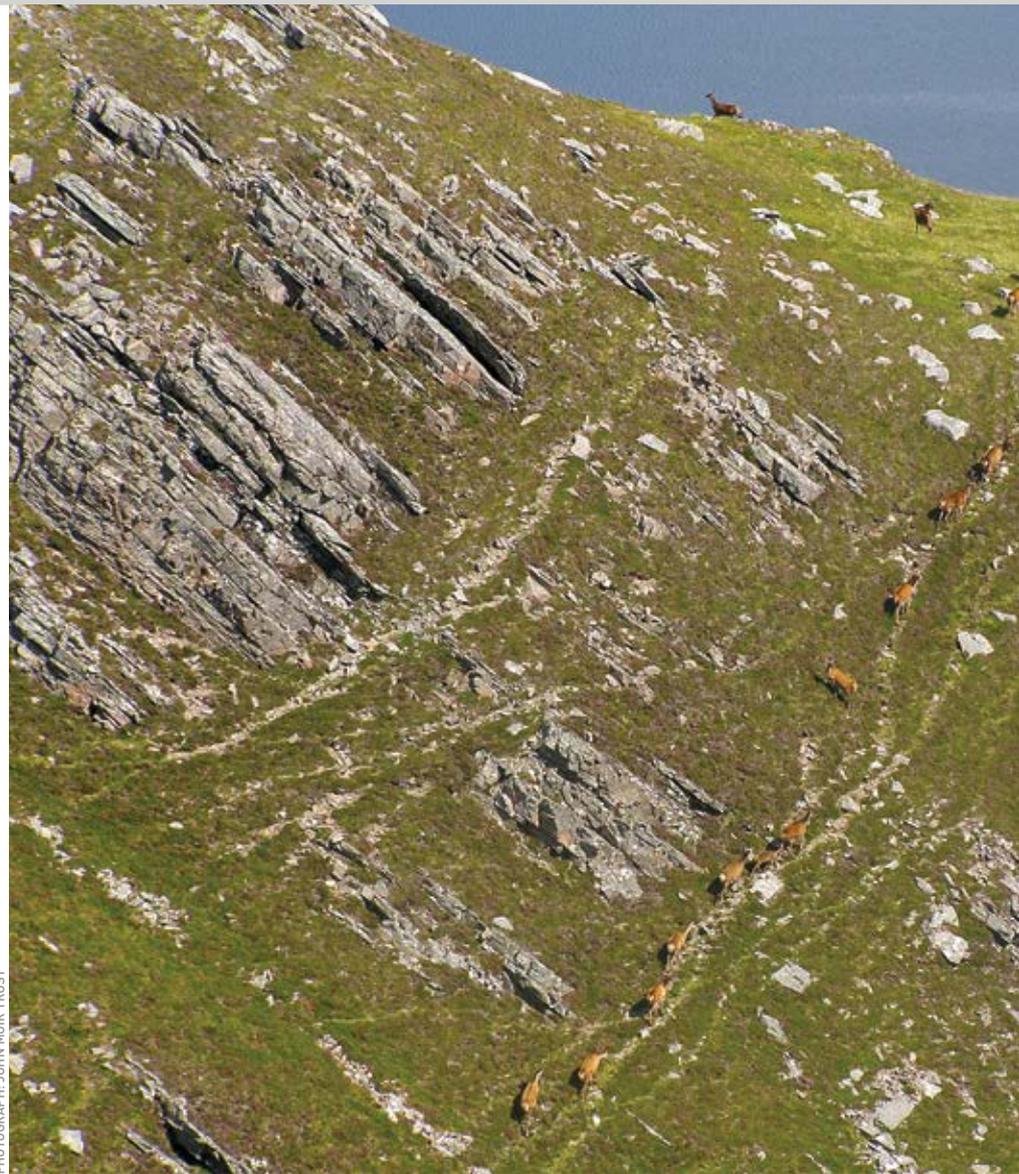
That was a quarter of a century ago. Since then, whole areas of society have changed beyond recognition to reflect shifting social attitudes and changing public policy priorities. Since 2000, Scotland has had its own parliament with full powers over

“By introducing sensible regulations ... we could regenerate woodlands, lock up carbon and improve the economic prospects for some of our most remote communities”

Mike Daniels

hobbled by the House of Lords.

“If we were designing a new system of deer management today in the context of accelerating climate change and large-scale biodiversity loss, it would bear little resemblance to the ‘traditional ‘sporting



PHOTOGRAPH: JOHN MUIR TRUST

land and the environment. It has abolished feudal tenure; enshrined in law the right to roam; given rural and urban communities the right to buy land and property; established a Land Register; created two National Parks; recognised 42

Wild Land Areas; and established a network of Marine Protected Areas that cover 22 per cent of Scotland’s seas.

Yet the deer sector remains largely governed by legislation enacted by a Westminster government a generation ago after being further

estate’ model found in large parts of the Highlands,” says Mike. “The rest of society has moved on in the decades since the Deer Act came into force, but deer management is still stuck in a time warp.”

While proposing sweeping revisions to the Deer (Scotland) Act 1996, the review group is also implicitly critical of the failures of Scottish Natural Heritage (SNH) to achieve any serious progress since it took over responsibility for the sector from the former Deer Commission in 2010.

It pointedly states, for example, that “it is important that SNH as the deer authority is seen to be appropriately independent and robust in representing and implementing public policy in its relations with hunting interests”.

Elsewhere it argues that “where a landowner is not making adequate progress in reducing browsing pressure by red deer and not responding to further advice, SNH needs to be able and willing to use its regulatory powers”. It also points out that the fact that the system is



PHOTOGRAPH: JOHN MUIR TRUST

Time for a change (from left to right): browsed and beaten; deer count, Knoydart; hill to grill talk at Quinag

described as voluntary, “does not reduce the need for SNH to use compulsory control powers where there is evidence that, despite advice from SNH, individual owners or occupiers have not voluntarily carried out culls that protect public interests from damage by deer”.

And while recognising the challenges facing SNH, especially within the framework of existing legislation, the organisation “needs a clearer sense of direction and greater intent to make progress”.

WAKE-UP CALL

It is strong stuff. Mike Daniels – who helped pull together a coalition of 18 environmental, community, forestry and recreational organisations to press for change – hopes the report will be a wake-up call to everyone involved in the sector, including SNH and the Scottish Government in addition to land managers on the ground.

However, he is under no illusions about the challenges that lie ahead. “We know we have a long way to go. The big question

is how many of the 99 recommendations will be supported by the Cabinet Secretary and the Scottish Parliament’s Environment Climate Change and Land Reform Committee. And if the politicians do push for change, will the timidity of civil servants and lobbying by powerful vested interests succeed in frustrating and diluting any legislative changes that may be proposed? And if changes are proposed, will they make it onto the statute books?”

With the next Scottish Parliament election scheduled for 2021, bringing with it the prospect of a second independence referendum, politics in Scotland is in a state of flux. How that will affect future decisions is unclear.

The response to the review by the traditional deer management sector seems to suggest a sense of inevitability that change is coming. What is at stake now is the scale and pace of that change.

Representatives from the shooting industry have acknowledged the need to make some adjustments but insist that the way forward is “evolution not revolution”. But, says Mike, this is a simplistic presentation of the options in front of us. “The word ‘revolution’ evokes the idea of tearing everything down and starting over from scratch, but no-one is arguing that deer stalking should be banned,” he comments.

“In the absence of natural predators, deer stalking will continue, possibly for generations to come. What we would like to see are regulations that ensure private landowners take responsibility for the consequences of their actions for wider society. We can’t afford to stand back and wait until evolution eventually takes its course, generations into the future. The choice is not evolution or revolution, but rather reform or continued ecological devastation.”

And the timing is critical, he argues. “Scotland’s uplands are potentially our greatest asset in the fight against the twin threats of climate breakdown and the mass extinction of species. But right now they are in dire ecological condition. Nowhere

else in Europe does there exist such vast expanses of bare, desolate, degraded hillsides.”

He points out that the Scottish Government has been praised for its efforts to combat climate change and last year led the rest of the world in declaring a climate emergency. “We have made progress in recent years reducing carbon emissions from electricity and waste,” says Mike. “We now need to devote the same level of scrutiny to the management and use of our land. The mass restoration of nature across our uplands has the potential not just to reduce emissions, but to physically remove carbon from the atmosphere on a grand scale.

“By introducing sensible regulations to compel deer managers to reduce grazing pressure we could, in a single stroke, regenerate woodlands, lock up carbon, increase biodiversity and improve the economic prospects for some of our most remote, rural communities.”

Whenever a major construction project – a large-scale commercial wind farm, a super quarry, a golf course, a theme park – threatens to alter the character of any of our wild places, there is invariably a public outcry. At the very least, new developments that blatantly scar our landscapes or damage our wildlife tend to generate controversy.

Yet day in, day out, year after year, decade upon decade, millions of acres of our wildest land are silently laid waste by great herds of grazing deer, provoking scarcely a ripple of concern beyond environmental and conservation circles.

It has been a long time coming, but things may be about to change. As climate breakdown escalates, extinction of species accelerates and remote rural communities battle to stay viable, Scotland’s age-old deer problem may just be about to be dragged out of the shadows to be thoroughly scrutinised by everyone with an interest in the future of our land. □

About the author

Alan McCombes is the Trust’s Public Affairs Advisor and Managing Editor of the Journal



Journey for Wildness

Clare Pemberton introduces an exciting new initiative designed to inspire us all to experience and, ultimately, help protect wild places

ARE you ready for a challenge? From April to the end of October, the Trust will invite members and supporters to raise a collective voice for nature by embarking on a 'Journey for Wildness': an adventure that connects them with the wild and also galvanises others to raise awareness and funds to help us protect and repair our wildest places.



Journeys can be long or short; on foot, or by bike; on land, or on water; solo, or in a group. They can incorporate litter-picks, tree planting, or other creative ways to actively conserve the places we care about – with the photos, stories and films generated shared in Trust publications and through our digital channels.

We will ask those who get involved to use these journeys to raise funds for our work helping people from all backgrounds to experience, protect and repair our precious wild places.

And Trust staff and Trustees can't wait to also get involved! Between us, we will complete 17 journeys that together connect the UK's wildest places - from Sandwood Bay in the northwest Highlands to Glenridding Common in the Lake District, and across the Peak District to Wales where we will summit Snowdon.

On each journey, friends and partner organisations will join us in completing conservation work, as well as collecting and sharing stories about the importance of wildness in our lives.

So do please join us! And if in need of inspiration, let some of those who have already pledged to #JourneyforWildness explain what they have planned ... ☐

Get involved

If you would like to plan your own journey, please visit johnmuirtrust.org/journeyforwildness to register your interest. We will provide a guide with ideas and advice on how to get started.

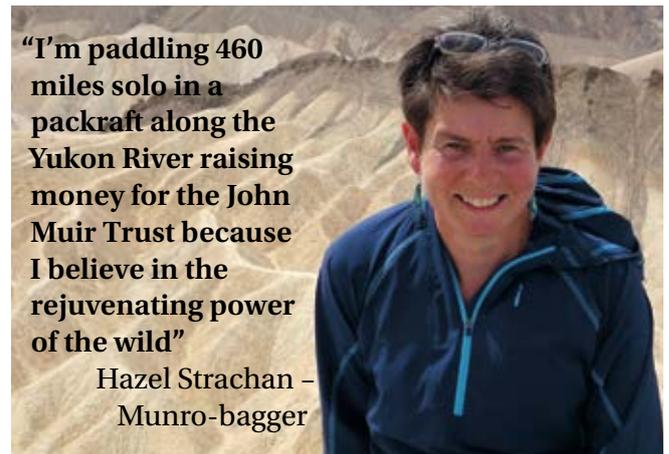
About the author

Clare Pemberton is part of the Trust's fundraising team



"North West Scotland is one of the wildest areas remaining in the UK. I will spend a few weeks exploring the area on foot, camping out at night, and looking at the impact of conservation and tourism and how to reconcile the two"

Chris Townsend –
Trustee of the John Muir Trust



"I'm paddling 460 miles solo in a packraft along the Yukon River raising money for the John Muir Trust because I believe in the rejuvenating power of the wild"

Hazel Strachan –
Munro-bagger

“I will travel through the Scottish mountains visiting some of the less obvious locations and attempt to record them in photographs – the perfect excuse to perhaps join one of the Trust’s fantastic work parties”

Graham Kelly – ultra-runner and adventurer



“I’m undertaking a challenge to visit all 82 of Great Britain’s largest islands and, along the way, will take time to learn how we can be low impact visitors and maybe even leave these places better than we found them”

Katie Tunn – artist and marine conservationist

“I plan to walk from Stonehaven on the east coast of Scotland to Onich on the west coast, crossing as few roads as possible, to highlight the symbolic importance of leaving our wild places untarmacked and unspoilt”

Alex Garrett – a young Trust supporter



“I’m looking at maps, checking my gear and starting to devise my own exciting Journey for Wildness. I’m struck by the fact this is a way I can help the Trust, while also getting out into the landscapes I love and sharing that experience”

Jack Lowden – actor

Root and branch

Trees play a vital role in absorbing and storing carbon dioxide, but that only tells a fraction of their story. **Ali Wright** explores some of the special trees found on Trust properties

THE human story is intricately connected with trees, our evolution entwined in their branches. There's a reason the tree appears in Norse mythology as *Yggdrasil* – an immense structure connecting different worlds and supporting the entire cosmos. We wouldn't exist without them and they continue to support our world in complex ways.

As keystone species, trees provide habitat for a myriad insects, fungi, plants and animals; they are responsible for clean air, flood control, drought control and bringing rain to the interiors of vast continents. And of course, they are also vital for our own health and sanity – little wonder given that we spent hundreds of thousands of years in the forest. It's where many of us still feel most at home.

To study trees is to discover how interconnected everything on the planet is. A German forester and author, Peter Wohlleben's wonderful *The Hidden Life of Trees* provides a fascinating insight into the ways that trees connect and communicate with other species around them, including each other, using networks of mycelium – a kind of information superhighway made of fungi.

When under attack from insect infestations or animal browsing, many trees emit chemicals to make their leaves less tasty, also warning others in the area to do the same. Trees that cooperate with fungal partners, providing food in return for nutrients, have been found to contain twice the amount of essential nitrogen and phosphorus than those which don't.

In old growth forests such as at Steall Gorge on the Trust's Nevis estate, these connections have been forged over centuries. At just 25 hectares it's a small area, but extremely diverse. Here there is a healthy mix of ash, Scots pine, birch, rowan, hazel, holly, wych elm, plus a sprinkling of oak and aspen.

"Ancient forests are hard to recreate," says Ali Austin, the Trust's Ben Nevis Land Manager. "You can't just plant the connections or create the mycorrhizal ecosystems that have formed over hundreds of years."

The trees grow from, and continuously give back to, a nutrient-rich hummus soil full of essential mycorrhizal fungi and other life. It's this diversity that makes old forests important and helps make them resilient against pathogens such as ash dieback.

And the ash is a favourite tree of Nathan Berrie, the Trust's Conservation Officer at Nevis. "It's an incredibly resilient tree and an expert coloniser when it gets the chance," he explains. "Ash is the first to take advantage when a tree falls in a forest, with a huge burst of seedlings all competing to make the most of the additional sunlight."

LINKS TO THE PAST

Now all too rare in Scotland, old growth forests form unbroken links to our past. The remains of artefacts in the landscape and old maps provide clues about what once grew there. At Quinag, a map from the 1700s identifies *Alt na Doire Cullinn*, or burn of the grove of hollies. Today, there is hardly a holly in sight, which makes the few that remain even more special.

"There is a great, big holly that I love," comments Romany Garnett, the Trust's Quinag Conservation Officer. "It is all on its



PHOTOGRAPH: CHRIS RUDEPHATT

own, set against a stunning backdrop and with a really beautiful trunk like an elephant's skin."

Fortunately, some old growth woodland survives here too. The Ardvair Woodlands form the most northern remnant of native oak woodland in the British Isles. Only five oaks remain, however, clinging on alongside sparse areas of birch, rowan, hazel, wych elm and aspen.

"The trees growing around Quinag tend to be small in stature and sparsely scattered as they're constantly lashed by salt-laden rain and battered by Atlantic gales," explains Romany.

The fact that trees can grow here at all is testament to their adaptability and great tolerance for variations in climate. As Wohlleben notes, if a spruce survives a particularly dry period, in future it is more economical with moisture. It's almost as if trees have memories.

Further north along the Atlantic coast, Sandwood has the least tree cover of all Trust properties – although that wasn't always the case. The fact that nearby islands still have healthy tree populations shows that, without intense grazing pressure, they would grow freely.

On the mainland, however, just a few species hang on. There is aspen on the cliffs and crags, as well as tiny, tenacious prostrate juniper. Juniper wood used to be an important fuel for illicit stills as it produces little smoke. It does have an amazing scent though; Nan Shepherd always kept a sliver of it in her pocket.

REGENERATION GAME

For Liz Auty, the Trust's Schiehallion Land Manager, it's aspen that has a special place in her heart. "They are very distinctive with their



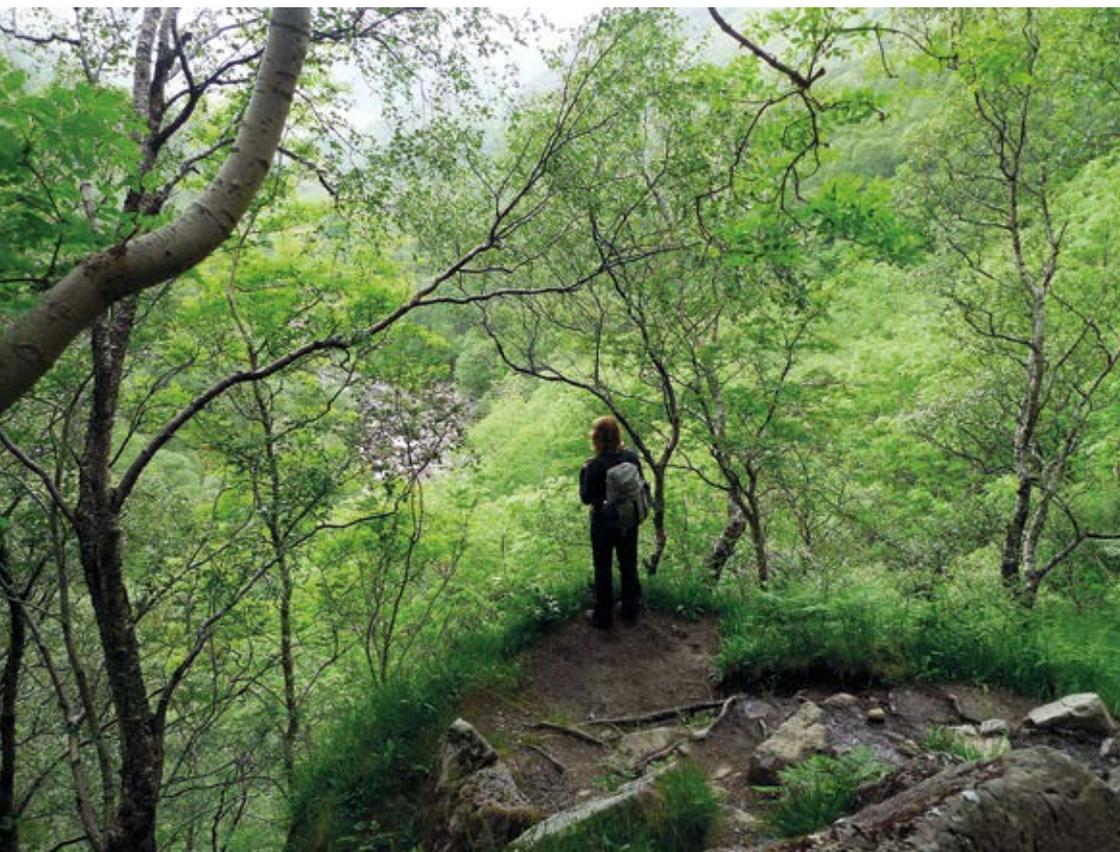
Tree tales (clockwise from main): a lone holly at Quinag; tree planting at Bla Bheinn, Skye; creeping juniper; dense woodland, Steall Gorge



PHOTOGRAPH: JOHN MUIR AWARD



PHOTOGRAPH: JOHN MUIR TRUST



PHOTOGRAPH: ALI WRIGHT

“The Ardvar Woodlands form the most northern remnant of native oak woodland in the British Isles. Only five oaks remain, however, clinging on alongside sparse areas of birch, rowan, hazel, wych elm and aspen”



PHOTOGRAPH: LIZ AULTY
Extensive tree planting at Schiehallion as part of the Heart of Scotland Forest Partnership

pale bark, while in autumn their leaves shimmer and shake as they turn a beautiful yellow,” she explains. “We still have a few hanging on to the steep sides of Glen Mhor.”

Notable also because it hardly ever seeds in Scotland, aspen is one of the species being planted as part of the Heart of Scotland Forest Partnership in Perthshire. The aim is to create a linked woodland corridor stretching across more than 3,000 hectares, including Schiehallion.

Elsewhere, the Trust has already overseen significant regeneration at Li and Coire Dhorrcail in Knoydart where it has spent the past 30-plus years planting and then protecting native tree species, primarily by reducing grazing pressure from sheep and deer. Today, the natural regeneration of birch, oak, hazel, rowan and other species has in turn created a diverse habitat for native wildlife such as pine marten, water vole, roe deer, bats, various woodland birds, plus countless ground-storey plants.

As well as being a lynchpin of truly biodiverse ecosystems, trees also show an amazing diversity between and even within species. There are around 60,000 species of trees on the planet with the offspring of a tree far more genetically diverse from its parent than we are from ours. In fact, trees of the same species can be genetically as far apart as different species of animals, which often helps increase the likelihood of them surviving disease.

At one end of the scale are the giant coastal redwoods of California that tower to heights of well over 100 metres, while at the other end is the dwarf willow found at Helvellyn in the Lake District, and also recently discovered near the summit of Schiehallion. At only a few centimetres high, it is the world’s shortest tree.

In recent years, Helvellyn has also seen a dramatic increase in numbers of one of the UK’s rarest trees: the downy willow. Thanks to the efforts of Trust staff plus committed locals who have helped propagate hundreds of downy willow seedlings in back gardens and potting sheds, more and more of these incredibly rare trees are now being planted out on the high crags.

HEALING PROPERTIES

As well as helping heal and restore land, trees have a similar capacity to heal us – something that is made apparent almost daily at Glenlude in the Scottish Borders. Gifted to the Trust in 2012, half of the property’s 149 hectares was covered in spruce and larch plantation, while the remainder was bare, sheep-bitten hillside. Fast forward eight years and thousands of plantation trees have been felled and replaced with mixed broadleaf species such as oak, hazel, alder, birch, willow and, soon, aspen as the Trust looks to create a mosaic of native habitats.

But what makes Glenlude’s trees truly special is what they mean to the hundreds of people who spend time here, including the regular army of volunteers, from schools and groups

undertaking their John Muir Awards to Trust members. Elsewhere on site, Phoenix Futures – a UK-wide drug and alcohol rehabilitation charity – manages a section of Glenlude now known as the Scottish Phoenix Forest.

“We like to give people ownership – they see it as their place,” explains Karen Purvis, Glenlude Land Manager. “We take them with us on a rewilding journey and they really feel a part of it.”

The benefit of this kind of approach – for people and woodlands – is palpable. As the ancient Japanese art of *Shinrin Yoku*, or forest bathing, has long demonstrated, time spent in the forest can be of great benefit to our physical and mental health. Certainly, the stories that trees tell and the reasons they are special could fill volumes. No wonder John Muir once said: “The clearest way into the universe is through a forest wilderness.” □

About the author
Ali Wright is a freelance nature and sustainability writer

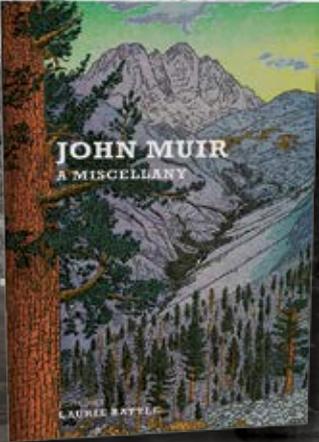


Did you know?

- The UK has the lowest percentage (13%) of tree cover in Europe. Scotland stands at 18.5% but 75% of those trees are conifers. England, on the other hand, has only 10% tree cover but 75% of that is broadleaf
- Legend has it that aspen was used for Jesus’s cross and that ever after the leaves would tremble in shame, hence the Latin name *Populus tremulus*

- The oldest tree in the world is a 9,550-year-old spruce in the Dalarna province of Sweden
- A mature beech can see more than 590 litres of water travel through its branches and leaves in a single day
- In fairy tales, going into the forest symbolises stepping into the unconscious. The people and creatures there represent different aspects of our psyche
- Tree evaporation allows rainfall in the interior of land masses. Without trees, the interior of continents would turn to desert around 400 metres inland from the sea.

“Thousands of tired, nerve-shaken, over-civilized people are beginning to find out that going to the mountains is going home; that wildness is a necessity; and that mountain parks and reservations are useful not only as fountains of timber and irrigating rivers, but as fountains of life.”
John Muir, *The Atlantic Monthly* 1898



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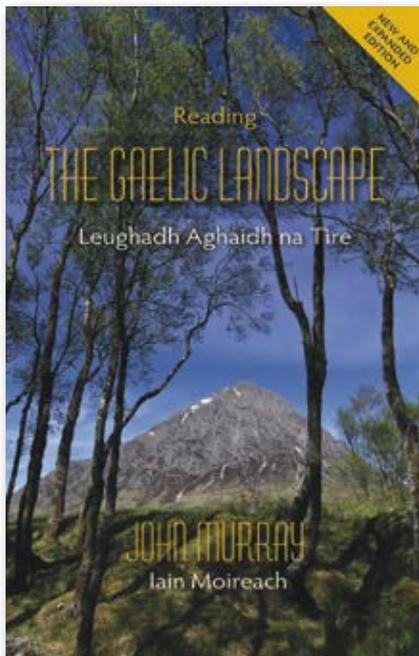
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Reading the Gaelic Landscape (*Leughadh Aghaidh na Tìre*), by John Murray

Ross Brannigan immerses himself in the rich language of the Gaelic landscape in a fully revised second edition of a book that will reveal much to walkers and naturalists

Le èiginn ar n-èirigh às ar suain
Le èiginn ar n-èirigh às ar suain
An Gàidheal 'sa leabaidh
An Gàidheal 'na shuain
Le èiginn ar n-èirigh às ar suain

THE opening lines of a track on Runrig's 1981 album *Recovery* cast a dark shadow over the place of Scots Gaelic in the twentieth century. The song, *An Toll Dubh* (The Dungeon), is a call to arms; a call to the Gaels to rise from their slumber (*Le èiginn ar n-èirigh às ar suain*).

I recall listening to that album on vinyl several years ago, the traditional songs speaking of a culture I had never experienced, but that nonetheless contained an intimacy with landscape that I wanted to access.

The Gaelic language in Scotland has endured a turbulent past: it was once spoken across much of the Highlands and Islands before persecution saw it sequestered into the corners of Scotland's remote communities. Even now, some native Gaelic speakers prefer to use the language only in private settings due to the negative connotations shackled to it over the centuries: backwards, old-fashioned, poor.

Yet, in recent years, the discourse on Gaelic has shifted. When I wrote my undergraduate dissertation on Gaelic media in 2017, the idea of the language reinventing itself for the 21st century to capture a new, young audience was something of a pipe dream. The last census showed only one per cent of the

population used the language.

Fast-forward to 2020, and Scots Gaelic has 191,000 learners on the language app Duolingo, and Glasgow is now home to the largest concentration of Gaelic speakers. A new age of Gaelic has begun.

It is against this backdrop that John Murray's second edition of *Reading the Gaelic Landscape* emerges. The book covers a lot of ground (quite literally), touching on everything from the theoretical basis for place-naming, to providing explanation and history to hydrological, topographical and anthropological features in Gaelic place-names.

Murray adopts the role of sagacious tour guide, leading the reader around Scotland, pointing out features of the landscape and providing insight into their history and place in Scottish culture.

As he writes in his introduction, the Gaelic language provides a lens through which to see landscape as something that humans are a part of, rather than apart from. Language becomes a gateway to understanding both landscape and culture – yet another reason for us to cherish wild places.

The book will certainly appeal to scholars of the Gaelic language and landscape, providing rich detail in an evolving field of study. For those young people taking a keen interest in the natural world, who are captivated by the language they are learning on their phone, or who have maybe lost connection with the landscape around them, it will also appeal.

At just over 200 pages, it is not enormously long, but does require a degree of commitment to navigate some of the linguistics and fine detail. Nevertheless, for those seeking a richer understanding of maps, place, language and culture, Murray makes a very fine tour guide of Gaelic Scotland.

£18.99

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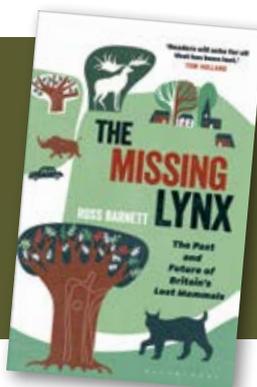
About the reviewer

Ross Brannigan is the Trust's Engagement Officer. See the autumn 2019 *Journal* (ps10-12) for Ross's feature on language and landscape

Others we like

The Missing Lynx, Ross Barnett

Early Britain was a rather different place, with humans sharing the land with lions, lynx, bears, wolves and bison. In this fascinating book, palaeontologist Ross Barnett uses case studies, new fossil discoveries and biomolecular evidence to paint a picture of these lost species and to explore the ecological significance of their disappearance. He discusses how the Britons these



animals shared their lives with might have viewed them and investigates why some species survived while others vanished. He poses challenging questions, too. Will advances in science and technology mean that we can one day bring these mammals back? And, if so, should we?

£15.29. bloomsbury.com

MeWilding, SCOTLAND: The Big Picture

With an underlying premise that 'rewilding' can be for us all, this 70-page booklet explores how we can help create a healthier world both for us and the creatures that we live alongside. Beautifully

Under the Stars – A Journey into Light, by Matt Gaw

Kevin Lelland sees a very different kind of light as he is reminded that nighttime is often the right time

IN A world swamped with artificial light, Matt Gaw asks if a life by day is in fact a life only half lived. For him, artificial light blinds us to so much: it is damaging to wildlife and humans, disrupting our natural rhythms, but also obscures the subtleties of other lights that have guided us for thousands of years.

In this enchanting second book – following *The Pull of the River*, his 2018 debut – the author sets out on a series of low-light, nocturnal adventures that explore how other forms of light, not least the ethereal glow of snow in winter, are revealed when we flick off the switch.

Exploring the power of light in all its forms, he wanders by the light of the moon in Suffolk and braves the remote moorland of Dartmoor; gets thoroughly lost in the

pitch-black woods of Cree; investigates the glare of 24/7 London; and rediscovers a sense of the sublime on the Isle of Coll.

Some of his juxtapositions are delightful. In an attempt to see the stars as keenly and clearly as possible, Gaw heads to the Scottish Dark Sky Observatory in Galloway. Later, he spends time sitting in a mini-woodland on a roundabout slap bang in the middle of Bury St Edmunds to better understand how street lighting affects wildlife. Alerted to this somewhat eccentric behaviour, the police have a word.

His tales inspire as he documents his fears and fascinations with the dark and reconnects with the nocturnal world. Well researched and beautifully written, each chapter stimulates with facts, folklore and history on subjects such as the moon, light pollution and historical sleep patterns.

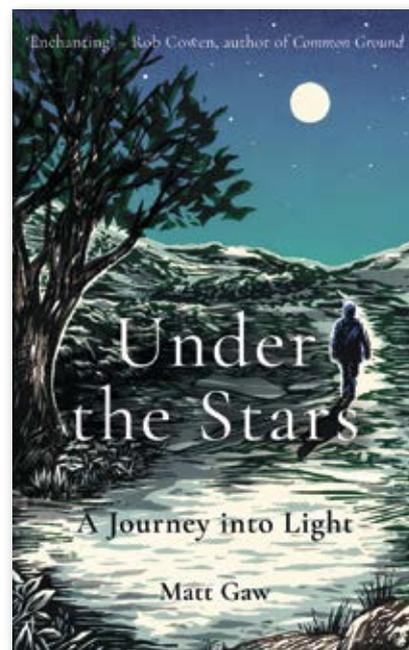
It's said that hunters and lovers see best in the dark. This book encourages all of us to experience our natural world in all its shades of darkness and light.

£12.99

eandtbooks.com

About the reviewer

Kevin Lelland is the Trust's Head of Development and Communications

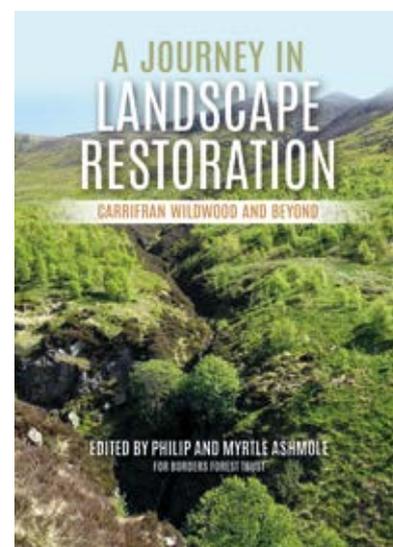


Coming soon *A Journey in Landscape Restoration, Carrifran Wildwood and Beyond*, by Philip and Myrtle Ashmole

GIVEN the Trust's links with Borders Forest Trust, and similarity of purpose, we very much look forward to the publication of this new title in May. Intimately involved from the very beginning, Philip and Myrtle Ashmole edit a collection of stories that together explore a project that saw local people who mourned the lack of natural habitat in the area, decide to act. The Carrifran Wildwood became the Borders Forest Trust's first major land-based project when it was founded two decades ago. Today, following removal of sheep and goats, and through the planting of 700,000 trees, Carrifran has become one of Scotland's finest examples of ecological restoration.

£18.99. Published May 2020

whittlespublishing.com

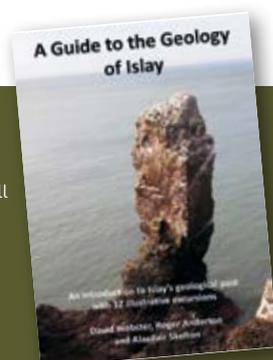


illustrated, it is packed with easy to follow ideas, from choosing plants for pollinators, making garden ponds, composting household green waste and planting trees to simply spending more time outside with children. In doing so, it encourages us all to let the wild into our everyday lives.

Digital or print version by donation. scotlandbigpicture.com

A Guide to the Geology of Islay, Dr Roger Anderton, Dr Alasdair Skelton, David Webster

The first in a two-part series – the second will cover the neighbouring island of Jura – this guide describes 12 varied



excursions that tell the turbulent story of Islay's geological past, from 2 billion-year old gneiss to the Ice Age. The geology of each walk is described at an introductory level with maps and photographs, while it also contains an introduction to geology section. For those with some geological background there is a section describing Islay's geological framework in more detail with some key references for further reading. Walks range from leisurely rambles to more demanding longer excursions – most of which are readily adaptable with shorter, easier options.

£14.99. ringwoodpublishing.com



Destination
Mongolia: Rosie at
rest (main) and
going full tilt!

Rosie Watson

In August 2019, 25-year-old Rosie Watson embarked on a 'New Story Run' – a largely solo journey from the UK to Mongolia exploring stories around how we can better live, work and meet our needs in the climate crisis. **Kevin Lelland** finds out more

How did the idea for the run come about?

I had wanted to take on a running adventure for years but was waiting to finish university. I also wanted it to have a purpose and impact in tackling the climate crisis, as that was the area I had studied and worked in previously. Adventures are a great way of sharing ideas in a unique and engaging way. I also knew I wanted it to last at least a year, and to start from my home in the Lake District.

Why are you calling it a 'New Story Run'?

Discussions with people frequently come back to the idea of needing a 'new story' for how we do everything – a positive vision, communicated in a way that connects with people, of what life might look like on a large scale, once transformed to more sustainable systems. The New Story Run was born!

What has surprised you most on your journey so far?

I had imagined moments of unexpected hospitality, just not quite so often. If I knock on a door and ask if I can camp nearby, half the time I am given a bed and made dinner. This isn't because of what I'm doing. People often wave me



PHOTOGRAPHS: ROSIE WATSON

inside before I've even explained what I'm doing.

From your conversations to date, what are people saying about tackling the climate crisis?

A common theme across all countries is the need for a mindset change – a move from 'why should I when x isn't', to 'I/we will be the change'. It's also increasingly clear that the capitalist system, and the way we 'do' economics, is not fit for the climate crisis. Businesses have a ridiculous amount of power over everything. We must find a way to change that.

Why have you chosen to run through wild places and across mountains?

I love mountains! They are also a great place for deep thinking. The human-nature relationship is something deeply rooted in climate crisis issues. Plus,

I wanted a good spread of stories from both urban and rural areas – too often we focus purely on what's happening in our cities.

What do you hope might be achieved at COP26 in Glasgow later this year?

Treating the climate crisis for what it is – a global crisis; considering how to implement whole system change e.g. post-growth economics; understanding that we have all the science we need to act; examples of ambitious leadership that drags others along; and decisions led by ethics and common values.

What you are doing is inspiring. But who inspires you?

Thanks! Kate Rawles. The people I meet every day, especially those in the Balkan region where I am now. Ursula Martin (One Woman Walks). Alastair Humphreys for his creativity. ReRun Clothing. Lots more!

You read a lot during rest times – any recommendations?

Yes, in order of preference: *100 Years of Solitude*, Gabriel García Márquez; *Siddhartha*, Herman Hesse; *The Power*, Naomi Alderman. All made me think about life in a different way. □

Further information

Follow Rosie's progress as she continues her run to Mongolia at newstoryrun.wordpress.com

Fuelled by the same aims, Rosie's run is now twinned with Mike Elm's New Story Ride, a bikepacking journey that started in Austria in November 2019. Find out more at newstoryride.wordpress.com

About the interviewer

Kevin Lelland is the Trust's Head of Development and Communications

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