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The Heather Trust

Scottish Charity No. SC010204

The Heather Trust is an independent charity dedicated to the promotion of high standards of moorland management for the benefit of wildlife, domestic stock, game and all people with an interest in moorland areas.

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Rob Marrs, President

This year has been

for the Heather

one of great change

Trust. Our Director of

lona-standina. Simon

Thorp retired (but is

still active), and we

managed to attract

a great new Director

in Anne Gray, who I

am sure will bring a

fresh approach to our

activities.



Rob Marrs

Change has been less obvious in the political sphere. Last year I wrote that we were no further forward in understanding how Brexit would impinge on upland land management, and unfortunately it is ditto for this year. Let's hope that some clarity on future options will develop over the next year.

Two noteworthy events stand out from the last few weeks. The first was the wildfire on Saddleworth Moor, which caused considerable damage and commanded news headlines across the country. Irrespective of where you stand in the

environmental debate on moorland management, it is clear that better policies are needed to prevent wildfire in the future. This is where the Heather Trust comes in as an honest broker; talking to practitioners, getting them involved in discussions and getting both policy-makers and land managers to improve their practice.

The second event was the sad news that my predecessor as President, Professor Charles Gimingham passed away on the 19th of June at the age of 95. He was the epitomy of academic excellence, but unusually this was coupled with both modesty and a real desire to get land managers to work in harmony. It was a privilege to represent the Heather Trust at his memorial service; he represented everything the Heather Trusts stands for.

MAMM

Rob Marrs President

Anthony Braithwaite, Chairman

know us through our

with it, always putting

in a couple of lots to

be bid for - and also bidding myself which

has led to me doing

all sorts of things I

would never done otherwise.

Many supporters

annual Auction. I have had great fun



Here are some examples

- Night sea trout fishing in Wales, given by a very generous supporter, Sir Ed Dashwood.
- A family trip round Balmoral in the harsh Cairngorm midwinter, an experience never to be forgotten by my children

- Half- netting with Sir Johnnie Scott in the middle of the Solway Firth, after a very liquid lunch
- Visiting Dick Bartlett's extraordinary moor in Aberdeenshire, with all sorts of clever devices to help him keeper it on a low budget (close to my heart)

The money raising side of the Charity is almost as important as what it does with its money!

Please help us by joining the fun in the next Annual Auction.

Anto Brallwark

Antony Braithwaite Chairman

Anne Gray, Director

This is my first

annual report for

the Heather Trust. I

started as Director

of March this year,

having taken over

from Simon Thorp.

Simon was Director

much the face and

engine of the Trust

There's been a lot

for all of those years.

for 16 years and very

at the beainning



Anne Gray

to get to grips with in these first few months, but it has also been immensely enjoyable. We have a great team of staff, contractors and board members that are committed to the Trust and its objectives. I am also pleased Simon is continuing to provide support to the Trust in his new role as a consultant.

I was drawn to the Trust because I liked what it stood for. Ever since studying environmental science and policy at university, I've been interested in how land use and management can move to a position of being truly sustainable. This is no easy ask - and it is of course not only a question for the land-based economy. However, coming from a family background in farming, it was the obvious choice for me and the area of environmental management that interested me most.

The Trust does an important job of occupying the middle ground between the economic uses of our uplands and moorlands, such as farming and shooting, and nature and the environment. It does this by taking up the "honest broker" role to aid communication and understanding between the various interests, by facilitating projects, by commissioning small but relevant pieces of research and by demonstrating and promoting best practice.

I like that the Trust is objective, that it seeks science and evidence to support what it does, and that it aims to bridge the communications gap between academia, policy-makers and practitioners. This is a good and immensely useful place to be, because an enduring problem I have come across in my career to date is that of poor communication between seemingly opposing interests. Often with better communication, it turns out that the two sides are much closer together than they realise. Without this, we often see the type of megaphone diplomacy that is unhelpfully played out in the media. While it won't provide all the answers, aiding improved understanding and better communication will help deconflict the many and varied interests in how moorland and the uplands are managed. It takes an organisation that is trusted and objective to fulfil that role.

As you will see on page x, the Trust has recently undertaken a strategic planning exercise. This has helped us to be clear about our goals and is enabling us to form action plans. I am very much looking forward along with the rest of the Heather Trust team, to driving those forwards in the years to come.

I am always interested to hear from anyone that thinks they have something to offer

Anne S Goy

Anne Gray Director

Office Bearers



President **Professor Rob Marrs**

Rob is a professor in the School of Environmental Sciences at the University of Liverpool and has a particular focus on bracken, fire and peatland.



Chairman **Antony Braithwaite** Antony is a landowner based in Northumberland with a keen interest in grouse and fisheries.



Vice President Mervyn Browne MBE

Mervyn was a founding member of the Heather Trust over 30yrs ago and specializes in bracken control work, particularly in Ireland.



Vice President Rob Dick

Rob is a farmer and business consultant based near Kelso and was chair of the Heather Trust between 2003-2007.



Vice President **Malcolm Hay**

Malcolm's estate at Edinglassie near Huntly in Aberdeenshire has become an important site for peatland restoration work.

Board















Dr Colin Shedden Colin is Scottish Director of the British Association for Shooting and Conservation and lives near Dunkeld.









management communities. **Dr Adam Smith**

Ian Condliffe

Robert Benson

Adam is Director Scotland of the Game and Wildlife Conservation Trust and lives near Perth.

Ian lives in Ilkley and was Defra's national principal technical

advisor for upland environmental

Robert was formerly the Chairman of the Moorland Association

and is an experienced sporting manager based in Cumbria with extensive links across upland

research and development.

Dr Dick Birnie

Dick is an independent research consultant based in Dornoch with a particular interest in peatlands, bracken and renewable energy.

Colin Matheson



Colin was a chartered surveyor and land agent for over 45 years and is currently a Director of the College Valley Estate in North Northumberland.

The Heather Trust Team

Director

Anne Gray has been Director of the Heather Trust since March 2018 and came to the team from Scottish Land & Estates

Director's Assistant

Anne Stoddart has been with the Trust since 2011 and supports the Director in all the Trust's activities. She also provides administrative support to Scotland's Moorland Forum, Working for Waders and Powys Moorland Partnership.

Project Manager

Patrick Laurie has worked on a range of projects for the Heather Trust over the past eight years, from heather beetle management to black grouse conservation. Patrick also leads our communications work.

Membership Secretary

Clara Jackson started work for the Trust in 2010 and manages memberships, finance and sponsorship.

Country Market & Sporting Sale Co-ordinator

Eppie Sprung joined the team in 2017 to manage our annual fundraising auction. Taking advantage of Eppie's skills, her role has recently expanded to include general business support to the Trust.

Consultant

Having stepped down as Director at the beginning of March this year, Simon continues to provide input to the Trust through his new role as a consultant.

Talking to Anne Gray ...



Where are you from?

I grew up on my family's farm on Coldingham Moor in Berwickshire. The farm was mainly sheep and had some beef cattle, and a jersey cow for milk! Me and

my two brothers got involved in just about everything from ploughing to clipping sheep, making hay and feeding cattle.

What attracted you to work for the Heather Trust?

The ethos of the organization. I knew of the Trust because I was already working in the land management sector in Scotland, and I liked that it occupied the space between nature and the rural economy.

I studied environmental science and policy at university, so I understand how important natural systems and process are not just because of their intrinsic value (important as that is), but because they underpin our economy.

What was your previous position?

I was a Senior Policy Officer with Scottish Land & Estates covering Land Use and Environment.

What was the best part of that job?

Two things. One, it let me explore the emerging concept of Natural Capital Accounting which I think offers an awful lot in terms of reconciling economy and environment. When I got what it was about, it was one of those lightbulb moments.

I also loved getting out and meeting landowners and managers across Scotland. People experiment with land use and management all the time, seeking a better result whatever they aim to produce or achieve and that is very inspiring.

How will your previous experience help the Heather Trust?

The Heather Trust is about people finding the right balance with nature so that moorlands can be sustainably managed. We seek to do that by developing, promoting and demonstrating good practice. In many ways it was that same balance that I was trying to achieve at Scottish Land & Estates too but through the legislation and policy framework.

What makes our uplands so special?

Their striking lack of mediocrity! The Uplands can seem constant and slow to change, but they are full of extremes - Beautiful in one light and bleak in another; places where temperatures soar in the height of summer and freeze in winter; remote and sparsely populated, yet with a greater sense of community than many urban streets, supporting a surprising array of wildlife. Perhaps it's the level of resilience that all forms of life need to have to exist in these places that gives them their really special quality.

What do you like to do in your own time?

I have had horses and ponies pretty much all of my life and they are still a major obsession. I am particularly passionate about Exmoor ponies – shaped by the place they come from, they are tough, strong, beautiful and utterly unique. They are also just that bit closer to wild than any other pony breed you'll find. They have something of a reputation for not being easy, but I prefer to think that they just won't be pushed around which is an admirable quality whether you're a human or a pony. I have two and a half exmoors; one of three being part-bred, as well as an old eventer/hunter type that I used to compete on a few years ago.

What is your favourite holiday destination?

I love Orkney and Shetland. Both are very different, and I would find it difficult to say which I prefer. They are not the uplands, but they do have some of the qualities and characteristics you'd find in upland areas. What I really enjoy about both is that they appear from the map to be remote outposts of the UK, but once there they don't feel that way at all. They very much have their own sense of place and identity. They are rich in history, nature and culture and they have thriving economies that are not overly reliant on tourism.

Visioning and Strategic Planning at The Heather Trust

With a change of Director at the Trust, we have an opportune **Vision and Mission Statement** moment to take a little time out to think about what the The Heather Trust envisions sustainable, balanced moorlands Trust is about and what we want to achieve. It is good for all for the benefit of everyone. organisations to do this from time to time, and particularly those steered by a non-executive board and members.

Our existing strategy dates back to 2007 and while there is still good and relevant content in it, the world changes and many issues have moved on, so time for a refresh.

To start the process off, the trustees, staff and contractors set aside a day in early July to meet up and agree on the basic strategic framework of vision, mission statement, core activities and the high-level outcomes we'd like to achieve. We met at Lockerbie Town Hall and were very ably guided by professional facilitator Grace Cardozo of Sleeping Giants.

There is still much more detail to be added to the Plan and we will consult more widely on it with members and relevant stakeholders over the coming months.

We intend to use this year's AGM event as part of that consultation process, so please consider joining us in the Peak District on Tuesday 23rd October to hear more and to share your thoughts with us. In the meantime, we wanted to share with you our draft vision, mission and strategic outcomes.



To help make this vision a reality, our mission is to develop and promote sustainable balanced moorlands through facilitation and collaboration; engagement and representation; education and demonstration based on research, experience and best practice.

To help us reach our vision and fulfil our mission, we have developed high level strategic outcomes that highlight the differences we would like to make over the next 5-10 years

Strategic Outcomes

Strategic Outcome 1 - The moorland ecosystem is better managed and valued, and has a full range of relevant biodiversity

Strategic Outcome 2 - The wide range of people and agencies with an interest in land use collaborate effectively to achieve positive outcomes for moorlands and its management

Strategic Outcome 3 - The voices of our members and stakeholders are fully heard and valued in order to represent the interests of sustainable moorlands

Strategic Outcome 4 - The Heather Trust is an effective and well-respected organisation with a sustainable future

Natural Capital: What is it and why is everyone talking about it?

Natural capital is loosely speaking what we used to call natural resources. It is trees, grass, water, soils, rock, wildlife and air. It is more than just a name change however. Natural Capital thinking is about a shift in mindset. The mindset at the time when we used to use natural resources terminology was around using raw materials in production and the manufacturing process and the idea that we might use them up one day wasn't much thought about. If we talk about natural capital, we can think about nature in the same way we would think about a capital asset in business - whereby we may use the interest from that asset to live off, but we should keep the asset whole and reinvest in it as necessary to keep it healthy and functioning, so that it can keep giving us interest/a living each year. The mindset change therefore is towards the sustainable use of nature.

To take the analogy on, in the same way that a business asset such as a factory is used to produce consumer goods, natural capital produces ecosystem goods and services. These include some traditional consumer goods such as food and drink, fuel and fibre, but they also include non-market services such as the provision of clean air and water, climate and flood regulation, pest control and disease resistance, and physical and mental wellbeing.

It would be lovely if natural capital produced all of the above in equal measure and plentiful quantity from every piece of land, but as society has come to understand more thoroughly the way the natural environment works, it is clear that when circumstances favour one output in particular, that can be to the detriment of another output. For example, when circumstances are favourable for grazing mammals it often supresses woodland. If this is the case, then the ecosystem service that is food provision benefits, but the "trade off" for that could be to the services of climate regulation and natural flood management since trees will sequester carbon and take up a considerable amount more water than short cropped grasses. Similarly, a crop such as barley benefits the food or drink provisioning service, and possibly renewable fuel too if the straw goes to an AD plant, but the "trade off" for that is that the field has less biodiversity, and water quality may be impacted if chemical run-off from the production processes is not carefully managed, as might water storage if soils become compacted.

On the whole there is no right or wrong answer to this other than the need to maintain some sort of a balance, so that across the landscape as a whole all of the goods and services society needs - be they market or non-market - are delivered.

Achieving that balance is the challenge and it is one that the UK government in the post-Brexit era is keen to see achieved. The UK Environment Secretary, Michael Gove, has embraced the natural capital approach and future rural policy is being shaped by it. Welsh Government policy is also reflective of this thinking and future rural policy in Scotland is showing some signs of heading in that direction too.

Whether governments choose to use more carrot (financial incentive) than stick (regulation) to achieve a balance with nature, or whether it will be the other way around remains to be seen. However, it is reasonably clear that taking better account of nature and the non-market goods and services it provides will be required of all landowners and managers. It would be sensible to be on the front foot now and be ready to deliver against this requirement in a positive way.

Rouden Pipetek

Rouden Pipetek was established in 2001 and has since rapidly grown to be recognized as a leading distributor of civil engineering and groundwork products in the South of England.

Amongst a wide range of products, Rouden supplies Moorland Mesh, a product pioneered over the last five years to help upland businesses improve their access to sensitive, fragile habitats without damaging them. The mesh grows into the turf and stabilizes the soil to prevent erosion and rutting on tracks and paths. Moorland Mesh has guickly developed a areat reputation with a number of leading upland estates and moors, and the material is highly recommended by several high-profile customers.

"At the Wemmergill Estate, which is one of the prestigious grouse moors in the country, we have used several miles of moorland mesh as supplied by Stewart Denton of Rouden Pipetek we have found the moorland mesh to be strong and



yet adaptable to cover very difficult moorland terrain. We are now able to gain access with ATV's to areas which were previously inaccessible.

Rouden Pipetek have been very supportive in advising over the use of this excellent product".

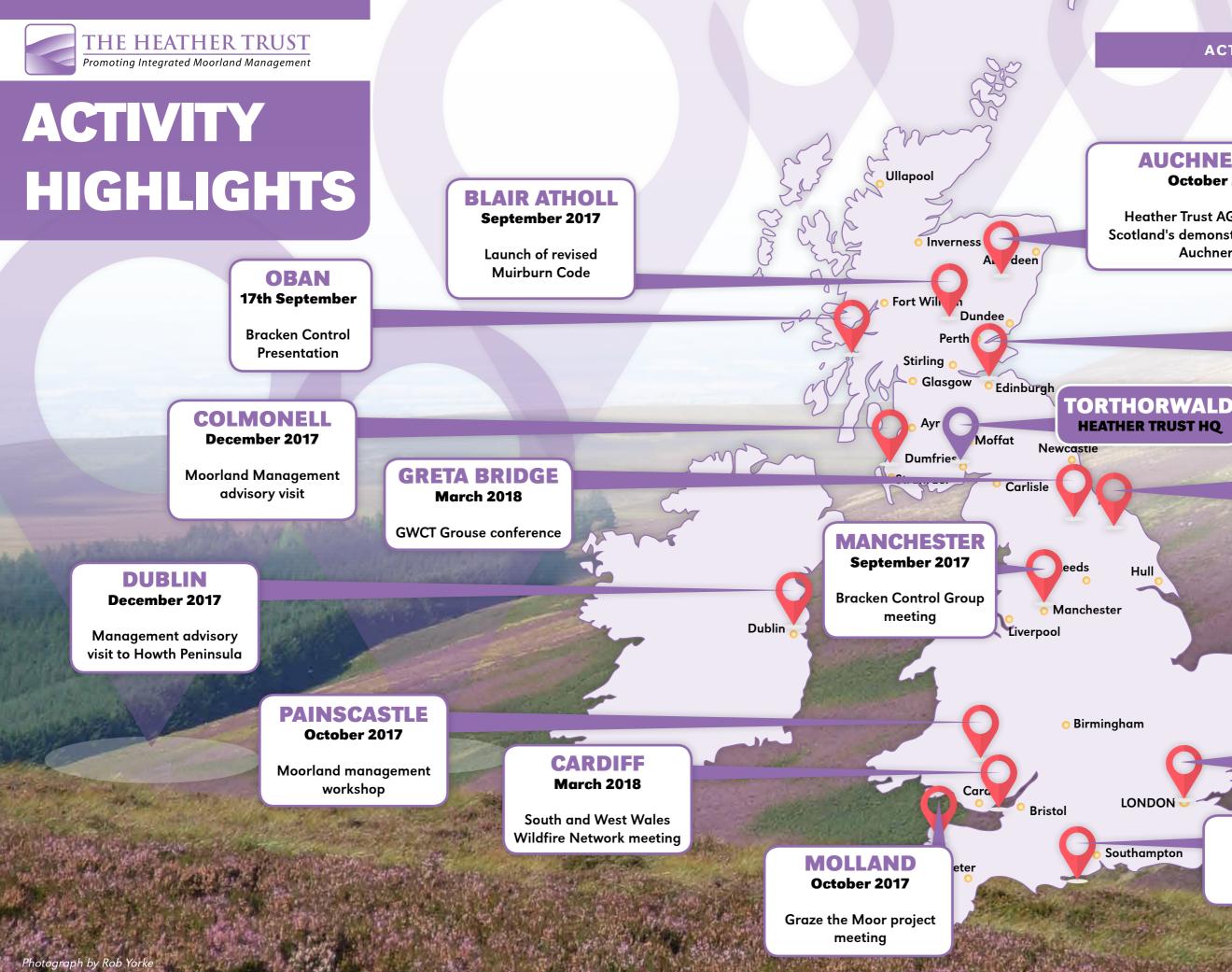
Richard Johnson

Director Wemmergill Moor Limited

Contact Stewart Denton at Rouden Pipetek to find out more about Moorland Mesh.

Tel: 01403 275 276 Stewart.Denton@rouden.co.uk

www.rouden.co.uk



ACTIVITY HIGHLIGHTS



Heather Trust AGM at GWCT Scotland's demonstration farm at Auchnerran

Hull

LONDON

EDINBURGH December 2017

Heather Trust board meeting

NORTH YORK MOORS October 2017

Bracken control event and drone demonstration

LONDON

Numerous meetings throughout the year, including those which involve the Uplands Stakeholder Forum and the Wildfire Research Group

BOURNEMOUTH November 2017

Wildfire conference

Heather Trust Annual Report 2018 **11**

Our new Sale Co-ordinator, Eppie Sprung, reflects on the 2018 Country Market and Sporting Sale and looks forward to the exciting changes coming in 2019

What a way to join The Heather Trust!



Straight in at the deep end: blown away by the generosity of our regular donors; bringing on board new donors under the brand new 'Moor Flavour' theme; cranking up our

Social Media presence; and managing the swell of brand new bidders!

The 2018 Sale raised the grand total of £30,763 from a combination of 69 Lots. Some of my personal favourites included: the notebook from artist Mel Shand, which was personalised to the winning bidder; the Exmoor Pony Day Experience, which not only gave you the chance to get up close and personal with the ponies but also included a consultation based on your own grazing possibilities; the walked-up shoot over Luise Janniche's beautiful and highly skilled pointers; and then of course the bespoke Macnabs (because I'm a competitive soul, who could not enjoy that sort of challenge!).

Looking forward to 2019, we have some exciting changes afoot. The last couple of hours of bidding are always really dramatic, as a flurry of bidding takes place, but for next year we are exploring options that may hype it up even further such as by introducing an event that will take place on the closing day of the Sale. The event will be centred on the 'Moor Flavour' theme using the produce of sale supporters to create an event to remember and hopefully raise some additional funds for the Trust. Never fear though, if an event isn't your cup of tea, the auction will still be taking place online so you won't miss out on the opportunity to win your favourite Lot!

Over the coming months I'll be busy contacting successful bidders to hear about their Lot experiences and I'll be talking to our donors to encourage the introduction of new and exciting Lots for the 2019 Sale. If I don't manage to catch up with you in person over the coming months, you'll be able to follow 2019 Sale progress on our social media channels, where I'll be showcasing both the Lots and the Sale event.

Once again, a massive thank you to both our donors and our bidders for their overwhelming generosity!

Save the date: May 3rd 2019

Tales from happy bidders!

Tom Aylott - winner of the Falconry Lot 2017



Falconry for grouse is something I'd always wanted to do but never had the opportunity. There are a limited number of moors that allow falconry, so a day out with Greg was a real privilege. Watching him work with his falcon and Hattie the pointer showed what a team effort it is, and

I was lucky enough to get a fantastic view on a number of stoops.

Antony Braithwaite - winner of the Muntjac shooting Lot 2018

In the Heather Trust Auction, I was lucky to win an evening Muntjac shooting donated by Sir Edward Dashwood at West Wycombe Estate. He is passionate about moorland management and determined to help upland regeneration in every way – exactly what the Heather Trust Auction hopes to encourage.

The evening fitted perfectly with a visit to London – it was very exciting to be shown this famous shooting estate with the Hellfire Club caves and beautiful follies round every corner. We had a breath-stopping stalk in the summer gloaming and eventually slotted an ancient buck with razor sharp incisors ready for battle and extraordinary scent glands on the snout.

They own EJ Churchill, Gunmakers, who host the World Clay Shooting Championships this year, using many of their pheasant and partridge drives, over which we stalked – hoping George Digweed (GB) wins again!

MacNabs

The last few years have seen an influx of MacNabs to the Heather Trust sale. Based on the old sporting tradition of shooting a brace of grouse, a stag and catching a salmon in a single day, the challenge has fascinated sporting folk for generations.

The MacNab pattern began in 2015 with a day donated by Finzean Estate on Royal Deeside. The challenge was our "Star Lot" and drew in plenty of interest in the run up to the sale, and the day was finally won by longterm supporter Alan Marshall. Unfortunately Alan fell at the final hurdle when he failed to hook a salmon in the Dee, but the day was otherwise full of adventure in a glorious location. Alan joins the ranks of many people who have failed within a whisker of success, and his story is a reminder that the MacNab challenge depends heavily upon good luck.

The 2018 sale featured some fun variations on the traditional MacNab theme. We had some great donations from new and old supporters, but the highlights were three unique lots which gave a new spin to an old challenge. The first of these was "the MacCheviot" - a rare and exclusive chance for a wild sporting day in North Northumberland

The MacCheviot was based on and around the stunning College Valley estate, and the winning bidder would have the chance to shoot a brace of grouse on the hill before heading out to stalk a roe buck. If successful at both, the challenge would then completed with the landing of a salmon or sea trout on the Ford and Etal Estate beat of the River Till, the only English tributary of the River Tweed.

Any one of these three parts would make for a fine day out, but the chance to bring them all together in a single 24 hour period puts a fresh and exciting twist on the experience. It is no wonder that the lot drew in several bids, and we look forward to hearing how the winner gets on in September. Our Chairman Antony also contributed a "MacNab" along with Charles May; the newly styled "MacTyne", also based in beautiful Northumberland.

The day would begin near Rothbury to walk up grouse over pointers for 3 hours with a picnic lunch on the hill. The donors were keen to emphasise that there were no guarantees of success, and bagging a MacTyne would be no mean feat! The challenger would then drive to Haughton castle for an afternoon's salmon fishing on the Haughton Castle Fishings of the North Tyne. Anglers would be shown the beat and offered some advice on promising pools before trying their luck in this beautiful stretch of the river. Success with grouse and salmon would kickstart the final leg of the MacTyne; a duck flight at dusk on the Haughton Castle pond. Bidders were thrilled with the prospect of this challenge, and the day drew plenty of attention from the outset. Having started the recent trend for MacNabs, the Finzean estate also stepped up and generously offered their own novel take on the traditional stag, grouse and salmon challenge for 2018. The "MacHedge" is named after Finzean's famous headkeeper Allan "Hedge" Shand, and the challenge requires an individual to take a roe doe, ten rabbits and a brace of pheasants in a day. Nobody can guarantee a successful MacHedge, but the winner can be sure of a relaxed, fun day in beautiful surroundings. Finzean is a beautiful mixed estate with a thriving 4 star farm shop set in stunning countryside, and the management team won the Heather Trust's Golden Plover Award for Moorland Management in 2015. The MacHedge helped to raise more funds for the auction this year, and our supporters commented on this unique and exciting range of lots.

We're looking forward to hearing how the winning bidders get on, and we will be following closely to finding out whether anyone is lucky enough to bag a MacCheviot, a MacTyne or a MacHedge in the autumn.

In the meantime, it's worth looking ahead to 2019 and the auction which will soon be upon us again. We always appreciate the lots we receive each year, but the quirky MacNabs were really fun to promote and they all raised important funds for the Trust. If you can dream up a sporting challenge unique to your area, we would love to hear from you.

Your idea might seem modest or bizarre, but we can guarantee that it will be perfect for somebody looking for a day out with a twist. Rabbiting, crabbing and even ratting are all fair game for future MacNabs; if it's good fun, we'd love to hear from you!



Peatland Introduction

Peatland has become a core issue for the Heather Trust over the past five years, and we work hard to raise awareness about the value of sustainable peatland management. Many moors are defined by peat, and like so many other areas of land use, healthy businesses depend upon healthy soils. Everybody wins when peat is kept in good condition, and the benefits are weighed in clean water, biodiversity, carbon storage and flood mitigation.

Peat has been extensively degraded in recent history, and the UK suffers from a combination of harmful factors which have damaged our peatlands. These factors often vary depending on geography; industrial pollution has caused devastation to peatlands in the Peak District, while commercial forestry has destroyed extensive areas of peat in western Scotland and Wales. Irish peat struggles with commercial extraction and many upland areas are now tackling the legacy of agricultural drainage and overgrazing. There is also evidence to show that inappropriate heather burning has played a part in some areas of peatland degradation, and the reality is that peat is an important resource which depends upon careful, balanced management.

The Heather Trust's involvement in peatland management plays perfectly with our stated aims. Peatland underlies many traditional land uses, and we are ideally positioned to help land owners and land managers to integrate peatland as part of their businesses. We work with a wide range of stakeholders from ecologists to farmers and gamekeepers to make sure that the latest research is always accessible to the people who need to implement it.

Why Restore Peatland



Matthew Cook is a Peatland Officer for Crichton Carbon Centre in Dumfries and Galloway. Matthew has worked for many years in upland regions across Britain. Formerly involved in the renewable energy sector, he is now happy to be working towards protection and management of the natural environment.

Some landscapes are easy to love - the majesty of mountain ranges, the vibrant and familiar green of native woodland, the epic

sweep of shore and sea; but what about bogs? Peatlands are sometimes regarded as wild and forbidding places, wasteland that is dangerous to travel through and of little use to humans save the extraction of peat as fuel or compost.

Peatlands don't often fall into the category of our favourite landscapes but it is now being recognized how very valuable and beautiful they are.

The use and management of landscapes changes over time, and in times of increasingly erratic weather patterns and climatic uncertainty we are seeing the importance of the ecosystems services that nature provides. Peatlands are an important part of this. Water quality, flood management and carbon storage are all inextricably linked to healthy peatlands.

Centuries of peat extraction has resulted in the loss of much of Britain's peatland and what remains has often been drained and managed in an attempt to improve the land for livestock, game, commercial forestry and peat extraction. This effort to harness a wild and often little understood natural landscape for the benefit of humans has resulted in fundamental changes to the functionality of this unique ecosystem. This has caused losses to biodiversity and in some areas has caused serious peat erosion and carbon loss.

Peatland restoration focusses on returning the hydrology and vegetation of drained and eroded peatlands to a more natural state. This is achieved by blocking and re-profiling ditches to raise the level of the water table, re-profiling



eroded hags and assisting vegetation to regenerate on areas of bare and eroding peat.

Healthy peatland, with good bog vegetation, particularly Sphagnum mosses, effectively holds and slows the flow of water. With increased incidences of flooding in the UK, restoring peatland to a more natural hydrological state can be an important part of natural flood mitigation strategies to protect our communities and land based businesses. With occasional dramatic droughts occurring, like this summer, keeping peatlands damp also helps safeguard our water supplies, slowly but surely refilling our boreholes and reservoirs, and protecting our moorlands from wildfire.

Peatland restoration projects are ongoing across the UK. In Scotland it is seen as a valuable part of the Scottish Government's ambitious climate change targets, which aim for an 80% reduction in emissions by 2050.

The fact that peatlands are a natural carbon store is now more widely understood. In a UK context, peatland soils store more carbon than all the above ground vegetation, including forestry. Drained and eroding peatlands, however, release stored organic carbon into the atmosphere and into watercourses, contributing to greenhouse gas emissions and poorer health of our rivers. Healthy peatlands act as a giant carbon store whilst also slowly capturing carbon and remaining a place for wildlife, peace and recreation. Not only

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do eroding peatlands lead to an increase in greenhouse gas emission, more fundamentally they lead to the loss of ground and can make access difficult and present a challenge for ongoing land management.

Healthy peatlands are a beautiful and diverse habitat sustaining many species of wildlife. A slow walk through peatland can reveal beauty such as the rich and varied colours of sphagnum mosses and Britain's very own carnivorous plant, the Sundew.

Culturally, peatlands are important to us in many ways, often existing in the imagination as mysterious wild places, a liminal space, neither wholly water nor land. References to peatlands in popular culture abound, from the use of sphagnum moss as wound dressings in the trenches of the First World War to the bogs in literature such as Conan Doyle's Hound Of The Baskervilles and Tolkien's The Lord Of The Rings. The evocative smell of a peaty Islay malt whisky may well be familiar to people who have never ventured to a bog themselves.

Protecting and restoring wild and natural places is important. Not just for economic benefit but for the benefits that the natural environment provides to society, our well-being and that of future generations.

Every year sees the amount of peatland being restored increase. Funding is available through various projects and organisations across the UK for land managers to commission peatland condition assessments and get support to improve drained and eroding peatland.

The true value of this ancient and beautiful natural environment is becoming more understood and appreciated, and as we move to a low carbon and more sustainable world, peatbogs will play an important role.

Peatland Restoration at the heart of a successful family livestock farm



Sarah Millar is a Farming and Land Use Manager for Soil Association Scotland. She was born and brought up at Easton Farm, Dunsyre, where she maintains an active interest in the business, including developing their recent peatland restoration plan as part of their AECS application.

My grandfather first came as a tenant farmer to Easton Farm, nestled on the western edge of the Pentland Hills in the 1950s. Easton was, and remains to this

day, a traditional upland family farm, and comprises of 1,512 hectares of mainly moorland, with some permanent grass and arable ground for stock feed.

At the heart of the farm is the successful livestock enterprise, comprising of 950 ewes and 90 cows. Easton has been organic since 2000, and has been part of several successful environmental management programmes, each one building on the success of the last. The addition of a wind turbine and biomass boiler in more recent years ensures that the business utilises as much of the natural resource available to it as it can.

However, it wasn't until 2016, when the business considered its recent application to the Agri Environment and Climate Change Scheme (AECS), that we realised it had been neglecting one natural resource in particular. The new



Plastic piling dams successfully storing water during the 2018 summer drought

targeting tool, brought in to help businesses identify priority habitats and species within their area, showed that there was a priority area of peatland on the eastern edge of the moorland that would qualify for additional points should it be restored within the scheme.

The area in question is one of the least accessible parts of the hill; avoided by sheep and shepherds alike due to the low nutritional value of the grazing and the high chance of getting the bike stuck. This is due to the network of drainage channels dug in the 1960s under a hill farm productivity scheme aiming to reduce the impact of liver fluke within the sheep flock, which, despite the theory and good intentions, remains an issue to this day.





Peatland restoration for us, therefore, involved the blocking of these ditches to raise the water table, and encourage the growth of sphagnum mosses that, over time, break down, forming layers of carbon rich peaty soils.

This can be done in one of two ways – either by creating peat dams using a JCB to dig out blocks of peat that are placed horizontally across the drainage channels, or by inserting plastic piling dams that also sit horizontally across the channels, but are more robust. Owing to the level of degradation of the peat, we decided on the latter, and so 24 piling dams have now been inserted every 30m along the ditches on our area of selected peatland.

This work we carried out in the winter of 2017, later than anticipated due to the wet weather in the summer and autumn. We used a local contractor who was recommended by SNH Peatland ACTION, who have a matrix of local operatives who understand the sensitivities of taking heavy equipment onto a wet peatland.

The dry weather this summer has given us an early opportunity to see how successful this project has been. Despite having had little rain since May, with the hill grasses and springs drying up, water can still be seen retained in the peatland.

We knew that by undertaking this project we would be contributing to multiple objectives that benefit the general public, including improving the quality of drinking water from the nearby West Water reservoir, storing carbon that contributes to climate change, and providing a favourable habitat for the masses of wildlife including grouse and wader birds that make this piece of hillside their home. However, there has been one benefit that we didn't anticipate.

When the plastic piling dams were put in, Dad suggested using some of the peat spoil that was taken out to create crossing points for the bike across the drainage channels. So alongside the public benefits of this project, we will also have some business benefits – gaining access to this area of hill for the first time will hopefully mean reduced time spent walking over it at gathering, and at lambing time the ability to check this area should increase our weaning percentage by reducing blackloss.

We are looking forward to monitoring this over the next few years and seeing how the peatland develops. This project ensures that, just like we have for the last 50 years, we will continue to look after the soil on our farm for the next 50 years, and everyone will benefit from us doing so.

PEATLAND



Drainage channels dug in the 1960s have led to the drying out of peatland



Peatland Issues

Peatlands place in the upland environment 10am -12noon, 2 October 2018

SRUC's Auchtertyre Demonstration Farm, Tyndrum

The Heather Trust has teamed up with Scotland's Rural University College (SRUC) to run a half day event as a precursor to this year's IUCN Peatland Conference. While most people agree that peatland restoration is a good thing, it is sensible not to think about it in isolation but to think about the part it plays in the life of the uplands.

People live and work in our upland areas, they earn a living from what can be produced there. It is important to understand this perspective in order to positively influence the choices those who manage the uplands make about peatlands.

Our half day event should help those considering peatland restoration to understand how it can help their management objectives, and it should help those who wish to promote peatland restoration to understand the needs of their audience.

If you'd like to join us, book your place contact Anne Stoddart on 01387 723201 or email anne.stoddart@heathertrust.co.uk

Peatland Connections: Building Prosperity 2 – 4 October 2018

The Shore, Loch Lomond, Balloch

With access to some thought-provoking sites to view restoration in action, and an exciting programme covering rural economy, public engagement and peatland conservation, the IUCN's Peatland Conference 2018 is one for your diary. More details can be found at www.iucn-uk-peatlandprogramme.org/conference-2018

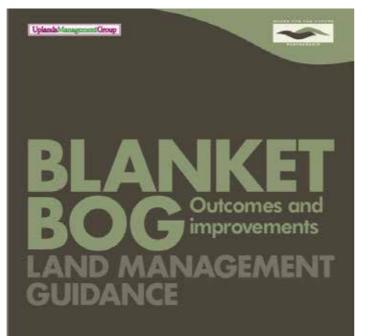


The Uplands Management Group

This group is formed from practitioners and produces guidance for practitioners. It is associated with Defra's Uplands Stakeholder Forum, although it is an independent Group. The Heather Trust has chaired the group since it was formed in 2016 and it has produced a range of guidance which is available at www.uplandsmanagment.co.uk. This has been linked to the implementation of the Blanket Bog restoration strategy that was produced by Natural England with support from the Uplands Stakeholder Forum.

In September, the Blanket Bog Land Management Guidance was published. This is latest in a series of three projects to produce guidance and it was completed with support from the Moors for the Future project in the Peak District.

New task & finish groups are being considered to address: monitoring protocols for peatland restoration, wildfire mitigation measures and management of the moorland fringe. It is hoped that these topics will introduce some diversity into the UMG's work and provide additional value for practitioners.



Restoring Scotland's peatlands...

Since 2012, Peatland ACTION has set more than 15,000 hectares of degraded peatlands in Scotland on the road to recovery.

Peat soils cover over a fifth of Scotland's land area, that's almost 2 million hectares! When degraded they release carbon, but by restoring them we can lock in that carbon and unlock many other benefits when they are in a functional and healthy state...

Stabilisation of eroding peat Improved water quality Enhanced habitat and biodiversity Reduced flood risk **Reduced wildfire risk**

 $w M \sim A$ Scottish Natural Heritage Dualchas Nàdair na h-Alba

Peatland ACTION

We are currently offering pre-application advice for 2019/20. For more information on funding, please contact peatlandaction@nature.scot





Planning for Wildfire





Simon Thorp is a consultant to the Trust, the Chairman of the England & Wales Wildfire Forum and a member of the Executive Committee of the Scottish Wildfire Forum. Michael Bruce owns Glen Tanar Estate in Aberdeenshire, runs a training and consultancy

business (Firebreak Services Ltd) and is Vice-Chairman of the Scottish Wildfire Forum.

2018 is becoming the year of wildfire in the UK. Recent wildfire incidents throughout the UK have raised the profile of wildfire to a very high level, and even by July the UK has still got the largest area burned

in Europe this year, much of it on moorland and heathland. It is timely to review The Heather Trust's involvement with this important issue and our work with the Fire and Rescue Services around the UK and other partners.

The Scottish Wildfire Forum was established in 2004 and is supported by the Scottish Fire and Rescue Service. The formation of the England & Wales Wildfire Forum followed in 2007 and is supported by Northumberland Fire & Rescue Service. Both Forums are independent multi-stakeholder organisations that are developing wildfire protection and prevention strategies to combat the rising threat.

The fires at Saddleworth Moor, on the edge of Manchester,

and Winter Hill, near Bolton in Lancashire, have had a massive impact and press coverage but these fires are only two of many that have occurred throughout the UK, and are not the largest. The fire and rescue services (FRSs) and land managers have been busy throughout the country since March, and the number of fires and area burnt has exceeded the recent averages. For example, the number of wildfires in Wales has been double the average.

But is this a problem for the fire and rescue services alone? The conventional view is that where there is smoke it must just be a problem for the fire services. The Forum's views are that the problem must be addressed much earlier and by many more interests. It is too late, when the smoke is already rising! A large fire at Wanstead Flats in East London on 15th July served as a reminder that wildfire is not just a phenomenon of remote, rural areas but now we also have the dangerous "wildland urban interface" fire issue.

The owners and managers of land should recognise that it is not a question of 'if' a fire will occur, it is 'when' and how severe the fire will be. A series of long term land use changes are increasing both the quantity and continuity of fuels on a landscape scale. There are also now many valuable assets, critical infrastructure sensitive habitats and species, and most importantly often large numbers of people, in fire risk areas . Planning for wildfire must become a part of land management.

We now need to think about wildfire protection, including: fire prevention, preparedness, response and resilience planning. A range of measures are needed, such as: creating firebreaks, improving vehicle access, reducing fuel loads, or providing sources of water for fire appliances and helicopters.



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of any moorland policy premium arranged for a Heather Trust member to the Heather Trust.



Continued from 22

Early indications from the fire on Winter Hill are that there was no wildfire protection for the major TV aerial sited on top of the hill. An early job for the FRSs was to create firebreaks to protect this aerial from the advancing fire. These safety measures should have been put in place in response to a wildfire risk assessment for the site.

Prescribed burning (heather burning, muirburn or swaling) has a role to play in the wildfire story. Fighting fires in tall vegetation is very difficult, as the flame length in old heather or gorse, can be six or more metres long, making it un-safe to extinguish it. Prescribed burning aims to break up and reduce areas of even-aged vegetation (fuels) but are we putting firebreaks in the right places? Cutting has it's place as well but does not remove all the fuel. We still have a lot to learn.

The EWWF, National Fire Chiefs Council, SWF, fire research community and wildfire interests in all parts of the UK, are making a pitch to all governments for these recent highprofile incidents to act as a catalyst for change on two key issues.

- There is a need for a more accurate, transparent, robust and comprehensive Fire Danger Rating System (FDRS) to provide advance warning of high fire risk periods
- The Forums advocate the setting up of multi-stakeholder fire groups in high fire risk areas that bring everyone, especially fire and rescue services and land managers together, to develop plans for how to respond, and share firefighting resources These groups have been very effective.

These two issues cannot be addressed without some resources being made available, but compared to just the firefighting costs associated with the Saddleworth and Winter Hill fires, a modest investment in pre-fire work in these areas will be good value for money.

A UK wildfire conference has been held every two years since 2003 and the next one is being planned to take place near Cardiff, in November 2019. These conferences have been crucial in developing support for wildfire work, it will be a date to put in your diary.

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Grinton Estate, Swaledale 2015/16/17/18

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Gunnerside Estate, Swaledale, 2017. Work carried out for the Yorkshire Dales National Park



The Bolton Estate. Wensleydale, 2016/17/18

Heather Beetle

After more than ten years of research into heather beetle, the Trust is now planning to bring together the key strands of our work in this area. Heather beetle has been a major issue for many of our members of the past few years, and we have travelled across the UK to gather information about beetle outbreaks wherever they occur.

Survey

Last year's heather beetle survey produced over forty reports of beetle damage across Scotland, Wales, England and Northern Ireland. Thanks to the survey, we have been able to capture information on beetle outbreaks over more than 16,500 acres of moorland, and this latest news will go forward to be analyzed along with data from previous surveys later this year. It is always hard to draw definite conclusions from these surveys, but a proper scientific analysis will be able to identify some patterns and hopefully inform a wider understanding of how beetle outbreaks unfold.

Based on an unscientific read-through of the survey forms so far, we can say that there are very few obvious trends. It sometimes seems like beetle outbreaks are much worse on wetter ground, then we receive news of damage caused to dry moorland. The survey forms make an attempt to differentiate between wet and dry conditions, but it will be useful to direct future work on follow up and end results.

In reality, it may not matter whether beetle damage occurs more or less on wet ground if the real issue relates to how heather recovers after an attack. It is logical that heather would find it harder to bounce back from beetle damage on wetter ground when the plant is inherently more fragile and slow growing, and this may be a useful angle to pursue in future years.

In the meantime, we are still looking for heather beetle survey returns for one more summer. Please let us know if you see beetle damage, and fill in one of our downloadable forms from the Heather Trust website.

Peak District

Anne Gray and Patrick Laurie visited the Peak District in March to visit some of the heather beetle plots which were established in 2013. This damage was treated by a combination of cutting, burning and leaving without management, and small trial areas were monitored over the subsequent five years. This has been a significant piece of research, and it is now approaching a significant milestone.

The initial study has revealed that there is a difference in response from the various treatments, and the project has also allowed ecologists Penny Anderson & Associates the chance to scope out a beetle damage severity index which may be useful in future outbreaks. Using the index, gamekeepers and moorland managers would be able to assess the extent of the damage on their land and then make decisions according to its gravity. This index is an unexpected bonus of the project so far, but we are confident that it will have several key uses. After five years (and a major resurgence in heather beetle damage in 2016), now is a good moment to stand back from the Peak District project and see where we are. We have asked our team of ecologists to carry out a complete site survey this summer, and we hope that this will allow us to identify the next steps. It would be interesting to study these plots over several years, but given the fact that our early results have now been overlaid by follow-up damage, there is no clear narrative which follows heather back to full recovery, and long term data may have little practical use.

This project refused to fit our plans from the very beginning. We have been playing "catch-up" on the original study ever since the original management treatments were thrown off by heavy snow in March 2013. It is frustrating that we could not follow the project exactly as we planned it, but this is a consequence of working outdoors in the uplands! We have been able to extract lots of valuable information, and we look forward to sharing it later this year.

Results

Our members and supporters are keen for answers on heather beetle. We understand your urgency and we hope that the work we are doing will help to widen our knowledge of this issue. We are planning to review all the work we have undertaken on heather beetle over the last few years with a view to drawing some definite conclusions so that your management is based on up-to-date science.

At the same time, we are starting to realize that there is no silver bullet to cure heather beetle damage. Management should be flexible and work within the bounds of local conditions. It is becoming clear that heather frequently rebounds from beetle damage and the plants often recover without any management at all. The most successful restoration work often requires little more than a light touch and some careful consideration of grazing levels. Fortunately, our survey suggests that the really bad beetle outbreaks which recur year after year until seedbanks are totally bare tend to be quite uncommon.

We are always happy to discuss management options with our members, and we offer an advisory service to provide help and guidance for anyone who needs support after an outbreak of heather beetle.

Heather Cutting

There is no doubt that burning heather has become more difficult over the last few years. Challenges range from wetter springs and a shortage of skilled manpower to changes in legislation and public perception. The result is that many areas of moorland are no longer managed using traditional techniques, and the skills required to burn successfully are now mainly limited to grouse keepers and a few shepherds.

We often find that once land managers stop burning for more than a few years, momentum dissipates and people quickly lose the confidence they need to get out and light fires. A well-managed moor is easy to burn safely, but areas of longer, unmanaged heather can soon become a major fire hazard - perhaps it's no wonder that newcomers are anxious at the prospect of burning.

Cutting was traditionally viewed as an inferior means of managing heather. Ten years ago, many people were cutting simply because they felt it was safer than burning and was better than doing nothing at all, but thanks to some determined experimentation and creative thought, a whole new range of possibilities has opened up, many of which have no direct equivalent in traditional techniques. The current generation of heather cutters are working with new machinery and fresh theories which make cutting more relevant and practical than ever before, particularly when these techniques are combined with traditional burning rotations.

Cutting has allowed some managers to specialize on specific aspects of the moor, from opening up old growth for livestock to maintaining firebreaks near woodland or urban areas. Grouse keepers have spent a lot of time thinking about how cutting can aid in chick survival, which plays a huge role in harvestable bags when the shooting season opens. Carefully customised habitat design can help to reduce chick mortality and shift the moorland environment in favour of young birds, particularly in marginal areas where full-scale traditional gamekeeping is not viable.

On Speyside, British Moorlands have worked hard to keep grouse chicks safe from predators by cutting in long, narrow strips across the hillside. This means that cover and security are never far away, and young birds can quickly escape into thicker heather when predators arrive. This theory also suggests that narrow cuts through mature heather can "trap" insects which are blown on the wind, and informal studies have shown that cuts provide just as much crucial insect life for chicks as traditional fires burnt over larger areas.

Cutting through mature heather also allows chicks to get access to mature blaeberry plants which are associated with a rich diversity of caterpillars and grubs. This aligns with work undertaken by the Welsh Wildlife Trust near Denbigh which has cut through areas of mature heather to improve access to insects for young black grouse. 2018 has seen a cold, dry spring in many areas, and a general shortage of insect life may prove to be telling later in the summer when broods are being counted before the shooting season opens.

Further south in Cheshire, Heather Trust Board member Richard May has been working on "Maze Cutting", which includes customised "lay-bys" and loops in areas of managed heather so that young birds have somewhere to dry out in periods of wet, windy weather. A little imaginative thinking can really start to "tweak" wider habitat management plans in favour of groundnesting birds, and while these often feel like small details, we believe that they can deliver a big impact when seen as a whole.

The Heather Trust showcases the work put in by moorland owners and keepers in order to generate discussion around new techniques and ideas to boost productivity. A good deal of the information we have gathered was fed into the recently published Moorland Forum Principles of Moorland Management guidance on Heather Cutting and the Trust worked hard to ensure that the final document is relevant and usable for practitioners across Scotland.

What does a sustainably managed moor look like?

That's a question which The Powys Moorland Partnership hopes to provide some answers to.

There is of course no one model of sustainable land use, things will look different in different places. However three moors in mid-Wales provide the setting for a three year Welsh Government and EU funded project exploring how to achieve a workable and long-term balance between nature and people, including those who earn a living from the moors and those who enjoy them for recreation. It is the classic sustainable development mix of environment, economy and society.

The initiative includes Ireland Moor, Beacon Hill and Bal Bach, and its primary focus is on the aim of reversing the decline of our iconic moorland bird species such as the red grouse, curlew, lapwing, and golden plover by restoring their heather moorland habitats and employing keepers. The Welsh Government are supporting the notion that grouse shooting can be a cornerstone land use since this form of recreation is the key economic driver to pay for full time moorland management from which so many public benefits flow.

Collaboration is identified as the key to success and much of the effort in the project is on bringing the various interests together to discuss and agree the best way forward, so that everyone gets what they need from the moors. This is done through a series of public events and surveys, to gather the knowledge and opinions of those who use, own, farm, manage and visit the three moors.

When it comes to restoring the biodiversity on these moors, a huge amount of monthly data is being recorded to help the landowners to quickly spot the key areas in which to focus their attention. Judging by the numbers of foxes and corvids being removed, vermin is clearly a key priority. However, maintaining the heather with the invasion for gorse and bracken is also a big challenge. Aligning the heather burning and cutting in light of the density of raptors is a recent area of focus after advice from British Moorlands's Dick Bartlett.

Catherine Hughes is the Project Manager and much of her time is taken up speaking with the various interests from owners, keepers and graziers to recreational and tourism interests. Catherine says ".....

Additionally, the Project is collating data from the moors themselves. A baseline natural capital evaluation has been carried out by a professional company. Some simple citizen science is also underway, with quadrats having been marked out so that measurements of percentage cover of plant species can be assessed, and vegetation height can be measured twice a year. In addition, some fixed-point photography has also been undertaken. All of these methods will enable progress to be measured in due course.

The owner of Ireland Moor, Will Duff-Gordon, is particularly interested in restoring some grouse shooting to the moors in Powys. Will witnessed the steady decline in the health of these moors during his lifetime and decided to kick start a much needed turnaround. In order to do this, it made sense to secure government support then begin an ambitions project that will stimulate investment in 20,000 acres of Powys moorland.

"Through multiple meetings and conversations we hope to create a better awareness of the public benefits that are performed by these moorland habitats. The end goal is that the land can continue to be enjoyed by many but within the boundaries of what is good for the land and its rare species. The public, farmers and landowners need to help the land become resilient to ever greater public use and provide ongoing funding for full time moorland keepers. We believe it's possible to achieve this and with an excellent team of keepers, advisors, farmers and local facilitators we are well positioned.

The Welsh Government have been excellent collaborators so far and we feel a great sense of duty to repay their faith and prove that employing moorland keepers should be the key driver to preserve and enhance the stunning mid Welsh moors".

The Heather Trust is very pleased to be involved with the Partnership. We are providing the training element of the project, and we are also providing some administrative support to Catherine Hughes to help her pull the various threads together.

So far we have provided events on Integrated Management and Bracken Control, enabled a keeper exchange between Powys and Aberdeenshire, and we were able to organise an advisory visit from Dick Bartlett of British Moorlands Ltd. We also have a best practice burning event planned for the Autumn and more to come next year. Our events have both a theory and a practical element to them and have been very well attended, with lots of good discussion, sharing of ideas and positive feedback.

For the bracken management day, we were able to draw on the expertise of Heather Trust President, Rob Marrs and Agronomist Jonathan Harrington and Welsh Water, as well as pull in a range of companies providing bracken management equipment for practical demonstrations on Beacon Hill. David Thomas manages Beacon Hill which is owned by the Our autumn event will be on Llantony Moor which is owned by Arwyn Davies. Arwyn's interest in being part of the Partnership stems from [can Arwyn/Catherine add something here?].

The three years of the pilot is not long in terms of moorland management. To see these moors truly offer a sustainable mix of outputs will no doubt take longer, but it is an important start that is enabling real and important progress to be made. As the UK moves towards a future for land management that is no longer supported by the Common Agricultural Policy, this Partnership is testing out some of the natural capital thinking that is prevalent in government at the moment. Their efforts now should stand them in good stead for the rural policy that replaces the existing farm support and rural development system.

POWYS MOORLAND PARTNERSHIP

Bracken Control

The Trust's interest in bracken control stems from the threat this plant provides to moorland diversity. It often out-competes heather and other species and as a result the biodiversity of the area is reduced, the grazing value of the area is reduced and the sporting potential is diminished. Add the impact on ecosystem services, the favourable habitat that bracken provides for sheep ticks and the way that it blocks access to hill ground and you have a compelling case for the control of this invasive plant.

Bracken Control Group

Simon Thorp, on behalf of The Heather Trust, has managed the activity of the Bracken Control Group for a number of years. It seeks to coordinate bracken control activity throughout the UK and to promote the control of bracken by any means. It is not just about chemical control and the group considers all control techniques. There is no 'one size fits all' solution for controlling bracken and the choice of technique often depends on the preferences, and the abilities of the bracken controller as well as the size and type of equipment that is available. Due to the nature of the plant, no technique will kill every bracken frond and some follow up treatment will always be required. It is the lack of follow-up treatment that is often the cause of bracken control being perceived to 'fail'. The best treatment regime may involve using different techniques; for example, if the primary treatment is carried out by a helicopter, it is likely that a more selective technique will be more efficient for the follow up treatment.

Bracken Control in Wales



The Trust were pleased to be asked to run a bracken control event as part of the Powys Moorland Partnership in July. This allowed us to discuss control options before heading out onto a local hill to view different control techniques in action. As ever, when talking to a group of people who have experience of controlling bracken a range of different techniques get mentioned. During this event the most original technique was dragging a girder behind a tractor. All techniques have been proved to work and there is always scope to try original, local approaches. There is no such thing as a wrong technique.

At the other end of the scale, the event included demonstrations of a remote controlled McConnell 'robocutter' and a drone





operated by Crop Angel. Such equipment provides more tools in the bracken control toolbox.

The use of drones for bracken control is being investigated by many companies. Although not

approved to apply chemicals from the air at the moment, a drone has potential to provide an effective means of control in certain circumstances. Because of their small size, drones are not best suited for primary treatment, which might be better carried out by larger equipment, but they could have a role in follow up treatment, and possibly in areas with difficult access, such as under overhead lines. The vegetation recognition and mapping software that is being developed could also be valuable; the drone could map all the areas of bracken and then be sent back to treat all the mapped areas. This would allow the efficient, targeted use of chemical.

Emergency Authorisation for Asulam

Asulam is a selective herbicide which is very effective against bracken, but it has not been registered for use in the UK since 2013 after changes to EU regulations. However, there is a

PDG Helicopters

Aerial Spraying is only one of many methods of Bracken Control and it can be a highly effective way of treating large areas of bracken when used correctly.

Experience demonstrates that helicopter treatment works well on closed canopy, dense bracken, but another atttraction of aerial spraying is that we can treat areas safely that would otherwise be difficult or dangerous to reach.

Timing, method and the correct quantities of chemical are essential for the best results.

- Bracken is in "full frond" between mid July and mid August, and this is the optimum time to allow uptake of the chemical.
- The chemical is mixed at 11 litres of Asulox in 33 litres of water and applied at 44 litres of product per hectare; a weaker mixture will lead to poor control.
- For the best chemical uptake, and therefore the best results, the application should coat the plant.
- Mandatory buffer zones should be treated by hand to ensure that the bracken rhizomes are fully targeted.

Further information is available from: www.pdghelicopters.com

procedure that allows a non-registered product to be made available if special criteria are satisfied. The Bracken Control Group have submitted an application annually since 2013 for an Emergency Authorisation to the Chemical Regulation Division. So far, these applications have been successful and asulam has continued to be available for the bracken control season. The 2019 application has been submitted and we await the outcome.

The Emergency Authorisation process can only continue while there is a chance that the application to register the product will be successful but such applications can take several years to process. The owners of asulam submitted the application for registration to the EU authorities in 2016, but it is not known when a decision will be made.

How much bracken?

It is likely that there will always be a debate about the area of land that is covered by bracken and whether this area is increasing or decreasing. Even with remote sensing to map vegetation it is difficult to assess bracken coverage. When is sparse coverage of bracken included in the area of bracken, and how do you account for bracken under trees or in hedgerows? Maybe the best approach is that we will never know the exact area, but it is clear that locally bracken can be a major problem.



Scotland's Moorland Forum

Chairman

After nearly 11 years in the role Lord Lindsay has decided to step down as Chairman and as this report goes to press, it has been announced that Forum members have elected Hugh Raven, from the Ardtornish Estate, to succeed him. A former adviser to the UK and Scottish governments and an experienced chair and non-executive director, Hugh has served in senior roles in the public, private and third-sectors.

Jamie Lindsay has provided exceptional service as chairman and he is greatly valued by all Forum members. It is likely that the handover will take place at the next Forum meeting in November.

Director

Funded – with our grateful thanks – by SNH, The Heather Trust provides a Director and administrative support to the Forum. The Heather Trust provides a Director and administrative support to the Forum. Simon Thorp is the current Director and has managed the Forum since 2007 first as Secretary and from 2011 as Director, and Anne Stoddart is the Forum's Administrator.

Simon provides below a round up of the last year's Forum activity

Forum Meetings

The spring and autumn Forum meetings take place in a central location, but we hold the summer meeting somewhere that can include and interesting site visit. In 2018, The Forum went to Carsphairn in Galloway where we met with representatives from the Galloway and Southern Ayrshire Biosphere. A good discussion took place that considered future land use policy in Scotland the role Regional Land Use Forums could have in tailoring national policy to local needs.

Muirburn Code

In September, last year, we organised the launch event for the new Muirburn Code that was attended by Roseanna Cunningham MSP, Cabinet Secretary for Environment, Land Reform and Climate Change. After a long and thorough review process, a good final product has been produced. The main differences from the previous version of the Code are that the new version is designed to be accessed online, it now includes more reference to management of vegetation by cutting and it has been brought up to date with the latest thinking about management of peatland. It is interesting that the previous version of the Code, which was published in 2001, had hardly made any reference to peat. How times have changed! There is more work to be done to develop and expand the Code's Supplementary Information and this will be tackled as soon as possible. It is helpful that funding for this development work will be available through the Principles of Moorland Management.

Principles of Moorland Management

Funded by SNH, this project aims to develop online guidance for practitioners on a range of topics. The first three; Heather Cutting (see page XX for the Trust's involvement), Management of Mountain Hare and Worm Control in Grouse are now available on the Forum's website and work has commenced on the next tranche of topics which includes Mountain Hare monitoring, Sheep tick control, Wader Management and Fire Danger Warning.

Understanding Predation / Working for Waders

The development of the Working for Waders initiative, as the successor to the Understanding Predation project absorbed a considerable amount of time during the year. The Working for Waders initiative now stands on its own and is separate from the Moorland Forum. More about it on page xx



Future Uplands Policy

With all the discussions taking place around Brexit and the associated changes to farm support and agri-environment funding, Forum members suggested that they should have input to an Upland Vision. This was put to Roseanna Cunningham MSP, but her response indicated that with all the Brexit related activity, the Scottish Government does not have the resources to make a good job of developing an Upland Vision. In response Forum members would like to contribute some initial thinking towards an Uplands Vision ready for when the opportunity arises to take it forward. The suggestion is that this could be presented more as an Uplands Manifesto.

Another use for the Uplands Manifesto could be to provide input to the review of grouse moor management that Professor Alan Werrity is leading for the Scottish Government. The review panel might find a clear view of current moorland and upland issues by Forum members useful.

Visit	www.moorlandforum.org.uk
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Working for Waders Introduction

The Heather Trust has been heavily involved with the new Working for Waders project, which has been covered in good detail by Ross McLeod. The Trust is a perfect fit for Working for Waders, and we add extra value in our ability to straddle the political divide between shooting and conservation. We work with gamekeepers and ecologists on a daily basis, so it makes sense that we should dive in and support a project which brings together a wide (and often disparate!) group of stakeholders.

Anne Stoddart is now acting as administrator for the Working for Waders project, and Anne Gray is administering the challenge fund established by SNH to kickstart the project. Patrick Laurie contributes to the Best Practice and Raising Awareness Group and has so far attended two meetings on our behalf. The second of these meetings was at Glen Prosen, where representatives from SNH, RSPB Scotland and the Heather Trust discussed the practicalities of habitat management on an upland hill farm and grouse moor.

Estate Manager Bruce Cooper (who is a joint chair of the sub-group) was on hand to talk visitors through the estate's management, particularly in relation to waders breeding in lambing fields and the significance of commercial forestry plantations.

The team at Glen Prosen has spent a lot of time thinking about how best to mitigate farming and forestry for the benefit of waders, and their success was obvious during a short walk along a farm track with oystercatchers, lapwings and curlews providing a constant backdrop of song. Lapwing chicks scuttled through the rushes, and common sandpipers called from the riverside on a gloriously warm June morning.

The meeting generated some good discussion from the project partners, and there was a good turn-out from independent local gamekeepers, naturalists and land managers who all joined the discussion. Particular emphasis was placed on marking vulnerable nests in areas of agricultural activity, and visitors were able to draw on experience which seems to suggest that a single well-defined route around lambing fields allows the shepherd to minimize the risk of crushing eggs and disturbing chicks. This may be more applicable to some farms than others, but this turned into a useful discussion which demonstrated the value of sharing knowledge between partners.

Working for Waders is still in its infancy, but the initiative has great potential to make a real difference for wading birds.

The Working for Waders project is now looking for your help as it begins to gather momentum. Part of the project's remit is to gather information on who is doing what for waders. In time this will develop into a substantial hub of information and networks, but the first step is to draw up a map of wader conservation in Scotland. If you are undertaking wader conservation, you can let us know and get involved by filling in the Working for Waders form on the website and returning it to the project at info@workingforwaders.com



Ross Macleod is Head of Policy (Scotland) at the Game & Wildlife Conservation Trust and Co-chair of the Information Needs Group.

Working for Waders is a collaborative partnership project aiming to halt and reverse the decline in breeding wader populations across Scotland. Current partners include the Heather Trust, SRUC, RSPB, BTO, SL&E, SACS, BASC, GWCT, JHI, SNH and individual estates, gamekeepers and interested members of the public

Breeding bird index figures published in early 2018 state that upland birds are the most 'concerning group', with 10 out of 17 species surveyed showing significant and worrying declines since the 1990s. Over the survey period, curlew have declined by 62%, lapwing by 63%, golden plover by 43% and oystercatcher by 44%. SNH have said that curlew and lapwing populations are collapsing towards crisis point.

Several factors are influencing this decline including climate change, land use change and disturbance, but research to date indicates that the most important drivers of decline are habitat management and predation. Waders need appropriate habitat for shelter, food and nesting. Broadly, this means moorland, rough grazing, pasture, marsh and other wet areas. Alongside these requirements, there is a disproportionate impact on vulnerable wader populations by predators whose populations are abundant.

The Working for Waders project partners aim to collate existing research and material on waders, making current best practice management advice available to people who can effect change on the ground. We will also adopt Adaptive Management, where successful and unsuccessful management actions are identified through trials; in this way, best practice can evolve, remaining relevant and targeted to the problem.

Quality scientific research is critical, but so too is community evidence gained from practical experience. Combining the two, a principle established by the Understanding Predation project, is a key part of the initiative.

The project is being delivered through 3 main work strands around raising awareness, collaboration and information needs. Each of these is supported by a project group, with overview provided through an over-arching facilitation team. The Raising Awareness Group is generating insight and to identify 'hot spots' for targeted action, for instance via grant-schemes and site designation. The group will also understanding about the challenges our waders are facing, as well as emphasising best practice to address the problems. assess the possibility of establishing a shared 'information The group is looking to build knowledge amongst the public, hub' to capture information in comparable ways, share stakeholders (including land managers and owners), research results and provide good practice guidance and centralised work and Government. support on wader monitoring methods and data collation and analysis. The output could contribute to the organisation The Collaboration Group is looking to inform the design of and interpretation of large-scale trials and investigations supporting active wader conservation in Scotland.

The Collaboration Group is looking to inform the design of more effective incentive schemes for wader recovery, for instance through targeted agri-environment options. It is also looking to stimulate integrated management of the landscape involving land managers and users - from farmers, estate managers and gamekeepers right through to other recreational users and local communities. Finally, the group is seeking to forge a better partnership between policy-makers and land managers over how to deliver the public interest and recognition of the resources and knowledge needed to achieve this.

The Information Needs Group is collating and reviewing the information already available, or being actively collected across Scotland on wader distribution, abundance, breeding success and associated influencing factors. This will help

Scottish Borders Wader Initiative

Background to the Borders Wader Initiative Grant Scheme: A biodiversity offset has been secured for the Berwickshire based, Quixwood wind farm, by Scottish Borders Council, on behalf of the developer, NTR plc. This is to compensate for the delivery of breeding wader habitat, covering the creation of new wetland habitats, ponds, scrapes and wet grassland management, to be delivered offsite, to provide habitat for breeding waders, in core areas, in the Scottish Borders and where possible, deliver wider public benefits.

Who is eligible to apply:

The project is open to any farm business, individual or organisation, who is interested in creating wader and wildlife friendly habitat, within a 20km preferred zone of the Berwickshire windfarm.

Eligible items:

- Wetland creation, Pond creation, Shallow scrape creation,
- Ditch blocking,
- Soft Rush cutting,
- Grazing management,
- Stock fencing,
- Other items may be approved on a site by site basis,

Funding levels:

The project can give assistance in two different ways to suit the specific project;

• Individuals: Grant rates of between 75% and 100% of approved costs (excluding VAT) for individuals. Discretionary payment and ceilings apply,

WORKING FOR WADERS

Although the three projects have dedicated resources, it should be obvious that there is considerable synergy between them. The partners will ensure that this is an essential component of the initiative, as they are clear about the need to act now to halt and reverse the decline in wader numbers.

Visit : www.workingforwaders.com

• Community groups: Grant rates of up to 100% of approved costs (including VAT) for community groups,

Advice and support:

Tweed Forum staff are able to offer site visits to help with site selection and the grant application process.

Contact Details:

Address - Tweed Forum, South Court, Drygrange Steading, Melrose, Roxburghshire, TD6 9DJ. Telephone- 01896 849723 E-mail- info@tweedforum.org

The Graze the Moor Project Molland Moor, Exmoor

The Graze the Moor project completes its 5-year term in March 2019. The main aim of the project has been to establish the impact of re-establishing grazing by traditional breeds of cattle, including keeping them on the moor during the winter. The economics of this enterprise are being compared with a similar size of enterprise that uses continental breeds of cattle that are housed over winter.

Other work tackled during the project has included habitat management, a Purple moor-grass Molinia caerulea control trial and stock health monitoring.

A final stakeholder event is being planned for late September in combination with Clinton Devon Estates in East Devon where similar work is taking place. The final report from the Graze the Moor project will incorporate some of the discussion from this event and it is intended that it will help to inform grazing policy in the south-west uplands.

So What?

We often fund scientific research projects which will advance our understanding of key moorland management issues. This work puts us in touch with leading scientists across the UK, and we are proud of the contribution we have made to progressive research over the past decade. If we cannot pay for entire projects, smaller donations often help to sustain longer term studies or explore additional material raised by other projects.

Our funds are strategically dispersed to achieve maximum "bang for their buck", and while we cannot always point to major headlines or big leaps, the Heather Trust has an excellent reputation for funding solid, useful science which makes a difference.

We have always found an important role in the middle ground between academia and practioners, converting the latest data into usable, transferrable information for farmers and gamekeepers with their "boots on the ground". This is a well established gap in the scientific process, and we would really like to develop this role in the coming years so that our members and supporters have access to the best and most up to date information.

Our first step in this direction will be to produce some documents which translate hard science into plain language. These "So What?" guides look at the work we have funded with the aim of extracting real, usable outcomes. The first "So What?" guide is currently being drafted and looks at a study of bracken control techniques in the Peak District. The Guide draws some interesting conclusions about the efficacy of spraying versus cutting and "bruising", and it may have value for anyone planning to carry out bracken control

Keep an eye on our website for more information on the new series of "So What?" guides this year and beyond.

Visit

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Heather for Holland

We are still on the look out for supplies of old heather for cutting and baling. The bales are then shipped to Holland for use in a biofiltration system. Let the Trust know, if you have heather with a stem diameter of at least 6mm that is on land where the heather can be cut, baled and carted to roadside for collection.

See the Reading Room on the Trust's website for more information: http://goo.gl/kmv5UH





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Exmoor ponies: one of the best instruments in your grazing management tool kit!

Linzi Green, Manager of the Exmoor Pony Centre, lives and works on Exmoor having been involved with the Moorland Mousie Trust and Exmoor Pony Centre for nearly 12 years. Joining the charity in 2006, Linzi has a background in conservation and has always been a keen horsewoman. Linzi and her collie dog Pax live onsite and are often found mucking out and handling ponies during daylight hours and spending time in the office throughout the evenings. An Exmoor pony owner herself, Linzi is devoted to promoting these wonderful ponies.

For thousands of years people have been managing the landscape, changing it to suit their needs both for economy and for pleasure. The Exmoor pony has been an integral part of Exmoor's landscape management for hundreds of years and in recent decades the Exmoor pony has risen to fame as one of the most effective and favoured conservation grazing animals both home and abroad.

Conservation grazing comes in a variety of shapes and sizes, with each site having its own unique requirements based on its flora and fauna, size,

accessibility and other users. Exmoor ponies have wonderful qualities that can enhance each sites unique needs. For example, on locations where there is a great amount of public use, the ponies will happily continue to undertake their grazing and ignore the public. A further positive as an alternative to cattle is that ponies do not have movement restrictions and can therefore move on and off sites when most convenient, or indeed remain on sites all year round. The Exmoor pony breed is hardy and resourceful, making light work of difficult terrain, harsh weather and also finding food sources in gorse and rough grasses. The ponies will move about sites finding water sources and shelter as they go; opening up thick scrub areas as they make their way around and making minimal damage with their well-formed and low maintenance feet.

One of the key reasons to employ grazing animals is to reduce the needs for mechanised clearance on sites, this reduces damage to the ground and also continuous management of re-growth. The Exmoor pony is an expert at living on wild areas as well as urban environmental sites and with years of experience of conservation grazing ponies can be picked to ensure the desired landscape management and improvement. There are hundreds of Exmoor ponies grazing sites throughout the UK and not only have they been repeatedly awarded for their positive environmental impact but they have become loved by their local communities.

The Moorland Mousie Trust has been a key organisation in encouraging the use of Exmoor ponies in conservation grazing and now supplies grazing herds to organisations including Wildlife Trusts, County Councils, RSPB, National Trust as well as working with landowners and estates to fulfil their grazing needs. In recent years the Trust has also managed the export of two grazing groups of Exmoor ponies to the Czech Republic to undertake landscape improvement as part of a re-wilding program on reclaimed military land, grazing alongside European bison in vast areas.

You may think that these ponies are selflessly contributing to the environment however, the Trust has a vital motive for its search to find grazing placements for its ponies, this being that the majority of ponies taken in by the charity would have not found futures after the weaning and gatherings in the Autumn. Over the years the charity has given the gift of life to over 500 ponies, hundreds of which have been able

EXMOOR PONIES

to secure places conservation grazing. The charity is a permanent source of advice and assistance with all of its grazing partners, ensuring the best welfare for the ponies and the most beneficial management for the environment. You can contact us on ponyofficer@ moorlandmousietrust.org.uk, call us on 01398323093 or visit our website www.moorlandmousietrust.org. uk. We work all around the UK with bases on Exmoor and in Northumberland, we will happily discuss any of your grazing questions.



Charles Henry Gimingham OBE, FRSE FRSB DSc

(28 April 1923 - 19 June 2018)



In 2003, I was tasked with asking Charles Gimingham to be the first President of the Heather Trust. His first reaction was, "I am well over 80 and trying to give things up, not take new things on", but then he agreed. This was typical of the man, always trying to help others get across the message of highquality environmental management to the widest possible audience.

He was after all "Mr Heathland", he wrote the "Biological Flora of Calluna vulgaris" in 1960, his classic "Ecology of Heathlands" textbook in 1972 and "The Lowland Heathland Management Handbook" in 1992. His final book, "The Ecology, Land Use and Conservation of the Cairngorms" in 2002, set the scene for the establishment of Britain's largest national park the following year. In 1995, in the foreword to "Heaths and Moorland: Cultural Landscapes", published to celebrate Charles' work,

Magnus Magnusson the founding chairman of Scottish Natural Heritage, , hailed Charles as a "living legend". In it, Charles wrote that "during the progress of nearly 50 years of heathland ecology there has been one very major change in perception. At the beginning of this period it seemed that there was little threat to heaths and moors because they were widespread in Britain, but it is now realised they are fast disappearing

throughout the west European heath region, including south England." His impact was based on two qualities. The first was high-quality scientific research carried out through a long career at Aberdeen University (1946-1988); he started as a research assistant and ending up as the Regius Professor of Botany. He became the foremost expert on heather and moorland landscapes, developing a long-running research programme on the management and conservation of the Muir of Dinnet near Balmoral.

During his career, Charles supervised many PhD students who went on to be international leaders in environmental science and when news of his passing appeared on social media, the number of scientists who claimed him as either supervisor or grandfather-supervisor was impressive. This included me, because my supervisor was Giminghamtrained!

The second was his ability to move research into practice. This started in 1955 when Charles led the first of several meetings of a government group of scientists and practitioners to advise on the standards of heather burning, impacts on soil fertility and the size and frequency of burning. This group included the pioneering ecologists F. Fraser Darling, W.H Pearsall and V.C Wynne Edwards and its work paved the way for a Muirburn Committee, which met four times between 1962 and 1965, and set in place the research and practices governing muirburn today, and to the publication of the Muirburn Code in 2001. He achieved this not by bluster or aggressive argument, but by quiet diplomacy and with erudite and dignified discussion; the embodiment of academic humility. In this he was incredibly effective and indeed inspirational.

Charles attended Gresham's school,

in Holt, Norfolk, and then graduated with a first in natural sciences in 1944 from Cambridge, where he was heavily influenced by Dr Alex Watt (himself an eminent heathland ecologist) and Professor Harry Godwin. He then spent a year as research assistant at Imperial College London, before moving to Aberdeen, where he was awarded his PhD in 1948. He gained a DSc from Cambridge in 1977 was elected a Fellow of the Royal Society of Edinburgh in 1961 and the Royal Society of Biology in 1967. He was appointed OBE in 1990.

Charles gave his time freely as a member of numerous government and agency committees, and served as President of both the British Ecological Society (1986-87) and the Heather Trust (2004-07). In his role as President of the Heather Trust, he provided sound wisdom and advice when asked, as usual in his own characteristic way, quietly but with great authority.

He is survived by Caroline and their daughters, Alison, Anne and Clare, and his grandson, Jack.

Professor Rob Marrs (President #2) with help from Professor Des Thompson and Dr Sarah Woodin via their Guardian obituarv

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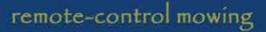






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