



Land management and deer management are changing – we should be leading the way

Photo: Laurie Campbell



Finlay Clark,
Secretary, ADMG

As we struggle towards what we hope will be the final stages for the UK of this terrible global pandemic we see many changes start to very quickly unfold in the world of land and land management. I suspect 'pandemic' will move to 'endemic', but we will learn to live with it. I have heard Covid-19 described as "nature fighting back" and "the Good Lord putting on the brakes". I suspect there are philosophical debates which will play out for a long time to come.

What we will see is the commitment towards climate change reversal and managing natural capital and biodiversity ramp up in a way which has made the last five years look like a warm up. Society (in the widest sense) demands change, and nothing motivates politicians better than votes. Business and industry are also grasping the nettle, again driven by investor demand and public feeling.

In the last 10 months we have seen values of woodlands and land suitable for woodland expansion - native and commercial - achieve sales prices which have never been seen before. The speed of increase has been quite phenomenal and there is now a huge gap between values being achieved and "the valuation" in the traditional sense. I refer to that uplift as the "natural capital premium".

We see numerous new players coming into the rural land market, but they are driven by natural capital rather than by economic potential.

There is no doubt that the face of land management will change and be driven by the climate change emergency. Woodland, water, peat, biodiversity and nature will be key, and we will need to manage herbivores and human interaction in balance with nature - and manage them in a way which delivers for the greater good.

I have been a lover of deer and deer stalking all my life and indeed worked for a number of years as a stalker at Atholl. I cherish all that is great about our industry. We have a world class product in a world class environment with exceptional people committed to welfare and excellence. We will see the move towards "managing land for nature and climate" accelerate and we need to find a way that protects all that we value highly. Deer and sheep numbers have been reducing for many years now and we will see that continue. What we do as managers of deer and land, and how we do it, will change. We must plan that change and embrace the future knowing that in the grand scheme of things we will have "done the right thing".

There will always be a place for deer in our woods and on our hills; they are a key part of the balance and a part of what and who we are. As we move forward out of C19 and beyond we must remember that as stewards of that environment we should be in front and leading the way.



Photo: Dick Playfair

A different model of 'deer forest' and a different model of deer management may be necessary in the future.



Bob McIntosh, Scotland's Tenant Farming Commissioner

This is a difficult time for the hill deer sector. The imperative to deliver 'nature-based solutions' to climate change has never been stronger and the expectations being placed on the land management sector are considerable. Planting trees and halting erosion of peat are easy targets when compared with, for example, convincing the population to travel less and are a significant part of the Government's strategy for achieving net zero emissions. If deer are seen to be, or are portrayed to be, a barrier to achievement of this then I fear that deer interests will simply be swept aside.

It is imperative therefore that the sector responds positively and recognises that a different model of 'deer forest' and a different model of deer management may be necessary in the future. Failure to move significantly in terms of delivering woodland creation and peatland restoration will allow those who are opposed, for whatever reason, to large areas of open land being used for sporting purposes, to accuse deer interests of holding back the battle against climate change. That is the reality that the sector is facing. Some will not like it but to resist the need for change is futile, given the current focus on climate change mitigation and restoration of biodiversity.

There are good arguments, impact on tourism being one, against the 'one size fits all' approach that would see the whole of the uplands covered in native woodlands, and these arguments need to be put forward, but resisting a significant move in that direction is likely to be seen as contrary to the public interest. I think it's inevitable that many open hill estates will have to think of the future as being one where much of the lower slopes are wooded with low density native woodland and that a smaller deer population moves between the woodland and the high ground. This is a model which is likely to be the future for many more estates in the uplands. It's a different one, but

one which has many advantages for the deer themselves and which will allow a sporting enterprise to be carried forward while demonstrating that the property is delivering for climate change and biodiversity. Promoting that model, and using existing estates already managing in this way as exemplars would greatly help to demonstrate the willingness of the sector to move. If there is a view that the sector is already moving significantly in that direction, then we must present the evidence in terms of new woodland creation and peatland restoration programmes - but they need to be happening on a significant scale.

Collaborative, integrated land management is the order of the day and the DMG approach provides a model for collaborative management. However, a single interest focus is becoming increasingly outdated and upland estates would do well to consider forming Land Management Groups that bring together properties within a relatively defined geographic area with the aim of collaborating over land management practices (including deer management) that are best developed at a landscape scale. This would greatly increase public acceptance of, and support for, the way that such estates are managed and would encourage properties within the geographic area that are not deer focussed to take part.

Government, of course, must play its part by providing the right incentives but the biggest barrier to change remains, I believe, a reluctance to recognise the direction of travel of Government policy and societal preference. Without acceptance of the need for change, and for new models of deer management, the sector will be dragged along unwillingly by force of legislation rather than being seen to lead the process of change towards a vision that is in tune with public policy.

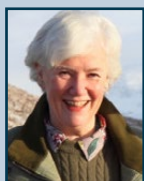
To be blunt, changing the processes and mechanisms won't be successful in delivering the vision if there is not a belief in the vision itself.

Bob McIntosh is Scotland's Tenant Farming Commissioner and a member of the ADMG Executive Committee.



*Broadleaf planting plots are in the distance on the left. Inverinate is on the right.
Photo: Joanna Macpherson*

Working for trees and deer at Attadale



**Joanna Macpherson,
Attadale Estate**

The long-term vision for Attadale Estate's woodlands is to create a positive contribution through integrated land management. We want our woodland ecosystems to thrive to a similar extent and vitality as the ancient woodlands that previously covered the glens and hillsides here.

But it shouldn't be a question of trees or deer, and it certainly isn't for us. We are intent on having both. For us they have equal importance for the estate.

We are in the midst of a major 20-year Forestry Plan. We have already planted 240 acres of native woodland in Glen Ling with another 340 acres in the process of being planned and approved. We are aiming for a grand total of 580 acres new planting in all.

As a part of our plan all the non-native conifer woodlands have been felled to allow the estate to convert these areas into native woodland. This will greatly enhance and expand the nationally important Caledonian pinewoods and the ancient semi-natural woodlands across the estate.

The felled areas are being replanted in 2021/22 with a mix of native Scots pine, birch, hazel, aspen and willows. This will better reflect the ground conditions and the surrounding environment. The inclusion of open ground to reflect natural edges, watercourses and flushes will allow the new native woodland to appear more at one with the landscape. We plan to have Scots pine planted in the harvested areas and the new planting will be of seed collected from the Caledonian Pinewoods within the estate.

The sites will be fenced to protect the new trees and the nationally designated Caledonian Pinewood situated along the Allt a'Ghiubhais burn. This will in turn encourage natural regeneration of the pinewood.

To compensate for the loss of cover and forage for the local deer population within these areas, previously established native woodlands situated along the Eas Ban will gradually be opened up over the next five years. The existing fence lines will be dropped in sections identified by the estate staff to allow gradual incursion by the deer.

A baseline regeneration survey has been carried out within these woodlands which has shown the sites are well established, with significant areas of natural regeneration, both inside and outside the fence lines, providing enough woodland cover to support a healthy deer population. The total area within these sites is significantly less than the felled areas but they will provide a better quality of cover and forage environment.

The results of our work will equate to almost half a million trees – and diverse and resilient woodlands for generations to come.

The estate has entered into the Forest Stewardship Council certification scheme which confirms that the forest is being managed in a way that preserves the natural ecosystems and benefits the lives of local people and workers, while ensuring it sustains economic viability.

In addition, Trees for Life have been doing some interesting work concerning regeneration of the ancient Caledonian Pine Forest as a part of its Caledonian Pinewood Recovery Project.



FUTURE PROOFING THE DEER SECTOR

Photo: Linzi Seivwright



Linzi Seivwright,
Caorann Ecological Consultancy

"It is one of the unfortunate paradoxes that a conscious sense of conservation seems to come only after a long period of devastation has made the need apparent. We ought to be able to do better than that" (Frank Fraser Darling, 1969).

Whilst humanity is facing some of the greatest global challenges it is perhaps too easy to think of it as someone else's problem as we go about our business in remote glens and secluded communities. But closer to home, the way in which we use land in Scotland, particularly the uplands, is being viewed as vital to how we respond to climate change. This will inevitably bring challenges for the way we manage deer as part of that landscape. So how can the deer management sector prepare itself, not just to be part of the solution, but to build resilience to tackle the challenges of the future?

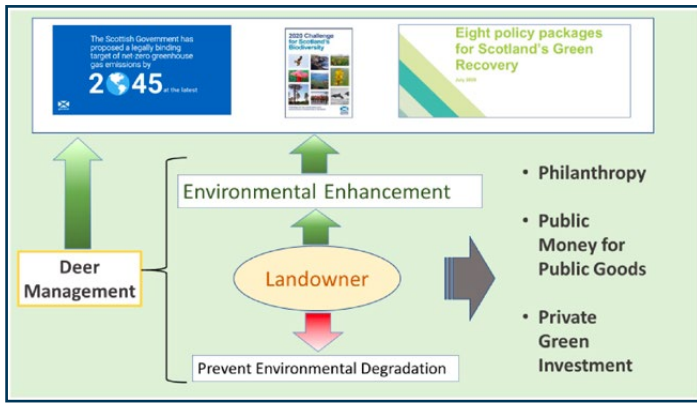
The Scottish Government response to Climate Emergency, biodiversity loss, and the impact of a global pandemic, has been to set out ambitious strategies and targets including a reduction in carbon emissions to meet net-zero by 2045 and Scotland's Green New Deal which sets out measures that will protect biodiversity, create green jobs and accelerate a just transition to net-zero. An additional £500 million is being invested in Scotland's natural economy, including £150 million to help deliver a 50% increase in woodland creation by 2024 and £250 million over the next 10 years for peatland restoration.

The delivery of many of these targets will rely on the appropriate management of Scotland's natural capital assets, such as soil, water quality and carbon-sequestering habitats with the emphasis being placed firmly on



enhancement. This presents an opportunity for those who own land to both contribute and to benefit, particularly as emerging funding mechanisms (both private and public) reflect these changing priorities. Greater flexibility in schemes will be required and recognition given that environmental enhancement takes time, particularly when it comes to woodland expansion and woodland connectivity. Taking deer management into account at every stage in the planning process will help avoid some of our mistakes from the past, not only ensuring adequate access provision but also in helping to mitigate wildfire risks, given the prediction for warmer, drier summers.

A key priority will be to think about how to build economic as well as ecological resilience and invest in infrastructure that will allow deer management to contribute in a more



efficient way to the local economy. This will be important particularly in the face of pressure to reduce deer numbers and uncertainties with the current venison market. Good quality jobs and business opportunities are critical to rural communities and deer-related employment and associated income and private investment could play an important role in supporting the Green Recovery of fragile rural areas.

Over the last 12 months or so, we have seen a distinct trend in consumers placing greater value in supporting local businesses and sourcing food locally, thus presenting an opportunity for venison. The colleges are key to building an adaptable workforce where deer managers of the future are armed with a diverse range of skills: including habitat monitoring and the use of technology.

A growing interest in land enhancement may mean that for some landowners the traditional element of stalking may become less important in the future. That said, the COVID-19 pandemic forced some estates last year to look beyond their usual stalking client base, stimulating interest and creating new opportunities more locally. Domestic tourism is only likely to continue to grow so how can estates best use that opportunity to their advantage?

The sector may also see a change in demand from stalking clients, with focus on quality not quantity and, with an emerging market for “wilderness experiences”, there could be a greater role for nature-based tourism bringing sticky money into the fragile rural economy. The sector already has a wealth of skills and knowledge and an amazing natural resource at its fingertips. There are opportunities to marry the traditional with the progressive for those prepared to think outside the box.

As deer management becomes more challenging, the role of information gathering to support evidence-based decision making will be increasingly important and technology is progressing at pace to help with this. The land management sector is seeing huge advances in the use of innovative technology particularly in the use of LiDAR and satellite remote-sensing technology to assess habitats and carbon sequestration. Developments in the use of drones for population census and thermal imaging are also advancing rapidly, making the practical management of deer more efficient and cost effective.

In all of this, collaboration will be vital and key to landscape scale management. Collaborative planning structures are already in place for the uplands, having

evolved since the 1960s and today, we have around 50 constituted Deer Management Groups with plans covering over 3 million hectares of the red deer range. Since 2014, Groups have demonstrated they provide effective mechanisms for collaboration which was highlighted in the 2019 Report by Scottish Natural Heritage (now NatureScot). With structures already there, and the type of information required for natural capital and carbon accounting processes already being collated in deer management plans, DMGs are well placed to deliver on new natural capital approaches to the management of land at a landscape scale.

In light of the pandemic, the sector has embraced the use of technology to help us communicate in ways that would have been unthinkable a year ago. Technology is improving communication, enabling meetings to be greener, more inclusive and accessible, as well as enabling information to be presented and disseminated in new and media-friendly ways. However, the sector must also consider how it communicates with the wider community and the next generation. This is vital if the current disconnect between a largely urban population and the countryside is to be addressed.

Where once conflict in deer management was largely confined to localised, practical disagreements, the subject of deer management increasingly finds itself at the heart of complex and often polarised ethical, societal, and wider political debates on issues such as land reform, recreational hunting and climate change. This is the magnifying glass under which the deer management sector finds itself. For many, stalking is an inherent part of Scotland’s cultural, social, and economic rural fabric. However, increasingly deer are seen as a barrier to delivering environmental objectives, so the potential for human-human conflict is likely to increase.

It is therefore critical that the sector seeks to find the common ground moving forward. For too long, deer have been seen as part of the problem but the narrative needs to change to ensure that deer management is seen as part of the solution. The deer sector is already making a significant contribution to the environment: it just needs to do more of it and be better at communicating all that it is doing.

What is certain, is that deer management will be a critical factor to success in future land use decisions. Deer management is only going to become more important not less, and we need a robust and adaptable deer management sector in place to undertake it.

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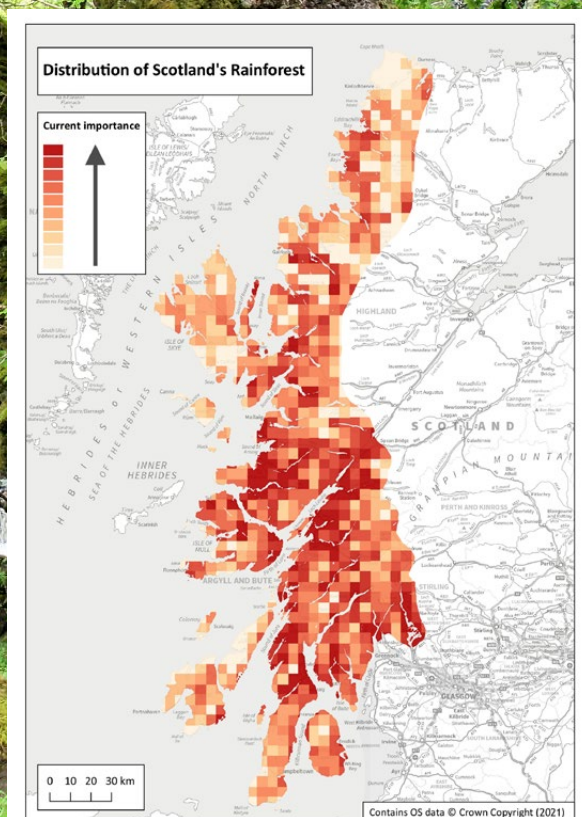
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SAVING SCOTLAND'S RAINFOREST

Photo: Gordon Rothero



Julie Stoneman, Saving Scotland's Rainforest Project Manager

Did you know that Scotland's has its own rainforest? The area on the west coast between the north of Sutherland and

the south of Argyll all lies in the rainforest zone. Here consistently high rainfall, year-round mild temperatures and clean air provide perfect conditions for development of coastal temperate rainforest (in the UK sometimes referred to as "Atlantic woodland"). This is a rare habitat. Less than one percent of the earth's surface has conditions suitable for it; and it is found in places as wide ranging as British Columbia, southern Chile, South Africa and Japan. In Europe it's found along the Atlantic coastline in other parts of the UK as well as Iceland, Norway, France and Spain.

Scotland doesn't just have a rainforest – it has some of the best rainforest in all of Europe. The climatic conditions and clean air are perfect for thick carpets of mosses, liverworts and lichens to develop on the trees, the rocks and in the ravines. They give the rainforest that magical feel when you walk in it. The names of the bryophytes and lichens themselves are magical – glittering wood moss; frizzled pincushion; golden specklebelly and tree flute. The combined profusion, diversity and rarity of these species make this habitat unique, and globally important.

These woodlands aren't just a rare and valuable habitat, but important places for the people that live and work among them. They support the rural economy through the creation and development of jobs and skills, as well as being important for physical and mental well-being.

However, not all is well with our rainforest. There are only 30,000 hectares left – not much larger than the size of Edinburgh, and these woodlands are mostly fragmented.

Many are being choked by rhododendron and too often they are unable to regenerate because of herbivore levels. In the past a fifth was overplanted with exotic conifers, and nowadays the challenges of ash dieback and climate change are looming. Without urgent help, we are in danger of losing this habitat forever.

So, to help the rainforest thrive once again, the Alliance for Scotland's Rainforest was formed. This is a group of more than twenty organisations, including NGOs and government bodies, many of which attend various Deer Management Groups, all committed to helping these rare and beleaguered woodlands. In 2019 the Alliance published *The State of Scotland's Rainforests* – a report which lays out why this habitat is so important and what we need to do to save it. As a result, the Alliance has set its course over the next few years to establish landscape-scale projects, identify changes we need in public policy, help land managers to do all they can to manage their areas of rainforest and maximise collaboration so we continually improve our understanding and management of this precious resource.

The challenge of saving this globally important habitat is vast, and the Alliance recognises that it cannot do this alone. Collaborative working with all those who have a stake in these west coast woodlands is essential, and Deer Management Groups have an important part to play.

If you'd like any other information about the Saving Scotland's Rainforest project or how you can get involved, please visit www.savingscotlandsrainforest.org.uk, or get in touch.

Julie Stoneman
Saving Scotland's Rainforest Project Manager
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Restoring Scotland's Peatlands during a pandemic

A picture of peatland habitat showing the installation of peat dams along a man-made drainage ditch using a technique called wave-damming.

The events of 2020 will last long in our hearts and minds, not least because we are still experiencing the impacts of the Covid-19 pandemic to this day. Writing this at home, there remains uncertainty as to when we will all return to "normal". Yet over the course of almost a year now, the ability of society to adapt has been astonishing and at an unprecedented pace.

This ability to adapt must also be harnessed in order to tackle the climate emergency. With Scotland's climate already changing, we must look to nature for solutions, with peatland restoration being key.

Restoring Scotland's peatlands

Scotland's peat soils cover more than 20% of the country and store around 1,600 million tonnes of carbon. When peatlands are in good condition they actively sequester carbon, but when they are degraded they emit carbon. It is estimated that over 80% of Scotland's peatlands are degraded.

In order to restore peatlands the Peatland ACTION project provides advice and funding to implement practical restoration techniques across Scotland. These include, but are not limited to:

- blocking drainage ditches to restore water levels,
- re-profiling peat hags (an overhang of peat) by rearranging peatland turfs cut from the hag to cover and stabilise the exposed peat over time (see picture a), and
- re-vegetating bare peat by transplanting sphagnum moss to an area of exposed peat soil (see picture b).

Peatland ACTION 2020 - 2030

The drive to restore Scotland's peatlands is higher than ever, with the Scottish Government announcing in February 2020, a substantial, multi-annual investment in peatland restoration of more than £250 million over the next 10 years. This is challenging, but with the cooperation of contractors, land managers and other partners, the scale and rate of restoration will increase massively in the coming years.

Favouring this is the large amount of interest we are receiving from businesses wishing to invest in peatland restoration, due to the increasing appreciation of the multiple benefits restoration provides to society and the opportunity to offset corporate carbon emissions. The Peatland Code has a number of validated projects, with others currently going through the approval process, now listed on the UK Land Carbon Registry.

In addition to the Scottish Government's long term funding commitment, we are now developing multi-year projects which will make the process quicker and more efficient. We still face a wide range of constraints including contractor capacity, weather and access to land around the various shooting seasons. However, on many estates we have been able to focus restoration activities away from stalking activities or agree mutually beneficial timing of works. In addition, we have to seriously consider the potential detrimental effect on the restoration work that could be caused by high deer numbers.

How to apply for Peatland ACTION funding

Due to the very nature of restoration work being outside and in small teams we have been able to adapt relatively quickly. Taking the necessary precautions, we are able to continue restoration on the ground this year.

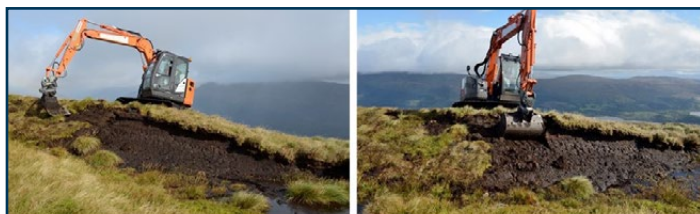
Applications are open to all landowners and land managers through NatureScot's Peatland ACTION fund or, if the peatland is located within either of Scotland's National Parks, the relevant Park Authority should be contacted in the first instance. We are planning to open the next funding round this spring and welcome early discussions with our area-based Project Officers prior to the submission of an application. We look forward to hearing from you.

Project information: www.nature.scot/peatlandaction

Peatland restoration and deer management case study

E: peatlandaction@nature.scot

Follow us on Twitter @PeatlandACTION



Re-profiling bare peat hags



Reprofiling a peat hag
© Lorne Gill/NatureScot



Transplanting sphagnum moss onto bare peat
© Lorne Gill/NatureScot



Photo: Glenfalloch Estate

Peatland restoration on Glenfalloch

David Lowes, Glenfalloch Estate

In 2017 Glenfalloch, in the Loch Lomond and the Trossachs National Park, was awarded Peatland Action funding on two areas (40ha and 200ha). The first area was completed but, because of contractor issues, the other area failed. The funding was moved to the 2018/19 year, but, owing to contractor problems, weather and issues with our Golden Eagle Special Protection Area, work was again cancelled.

Thankfully, in mid-2020 the National Park's Peatland Action officer again approached us and we identified a viable area (around 80ha) for which funding was still available. The application was successful, work started on site mid-December 2020 and was completed in January 2021.

There remain significant areas on Glenfalloch with potential for habitat improvement and carbon sequestration and we will continue working with the National Park's Peatland

Action officer to achieve further restoration. It is clear that without this valuable support, as well as significant input from us, our aspirations would have failed.

The Inveraray & Tyndrum DMG is focussed on habitat management and improvement of woodland, peatland and indeed the open hill. The Peatland Summits convened by Cabinet Secretary Roseanna Cunningham are promising, particularly with the focus on opportunities for multi-year funding. This is essential in our view, given the scale and importance of peatland restoration, set against the acknowledged problems including of timing, weather and contractor expertise and availability.

We will also continue working with third parties to establish whether there might be other possibilities for securing a return for the carbon or natural capital value as well as on our woodland regeneration and other habitat improvement plans.

SCOTTISH VENISON UPDATE



Dick Playfair,
Scottish Venison Association

It has been a difficult and unprecedented time for venison supply. There has been some progress, but also knockbacks.

The UK retail sector has continued to perform well. We know from Kantar's research last September that venison retail sales grew during the first six months of the pandemic and feedback suggests that that growth has continued through Christmas. This has been achieved, and venison's position on the shelves supported, by significant discounting and promotion by processors. In mainstream retail venison has to be competitive with other red meats and we have seen this happen.

There will also have been some improvement in sales through Christmas through mail order and click and collect and we know of several smaller businesses that have sold well through the Christmas period and have continued to do so into January with Burns Night as the hook.

But on the downside following the partial reopening of restaurants, catering and foodservice through late summer and autumn last year and some trade these were then shut down completely before Christmas right across the UK. This was a major blow. The closure of the hospitality and events sector too has meant that certain parts the carcass, eg saddles, have been difficult, if not impossible, to shift. The venison holding in cold storage has increased and that is going to impact on future sales for the next year or more as normality returns.

The closure of restaurants, catering and food service forced SVA, after careful thought and discussion with Scotland Food & Drink and the Scottish Government, to postpone the online campaign that has been funded through the industry recovery programme. It was due to break in December but will now be launched on 1 March.

The campaign will run for a month. Incidentally, Scottish Venison was the first industry body to receive funding through the recovery programme. The campaign fits with the industry strategy to 2030, and the whole sector should come out of this stronger with the profile of Scottish Venison raised considerably across UK markets as a result (see the separate panel about the campaign).

There has been some negative publicity regarding closure of the restaurant trade nationally and how this has impacted on the cull and stalkers going about their work, or not, with predicted environmental damage as a result. This story which broke in the Observer and the Guardian in January has been driven by what is happening south of the border. Certainly, what is being written by stalkers and about stalking in England would suggest that there are major issues as supply into hotels, restaurants and for events is non-existent. In the middle of last year a Wild Venison Working Group emerged in England and Wales to help to coordinate effort and supply and, whilst retaining our separate Scottish identity which we have worked hard to develop over the last 10 years and more, we should work with partners in England and Wales (and the British Wild Venison 'label') to maximise opportunities as the Covid crisis recedes.

The export season passed before Christmas and has not been without issues either. Stories immediately post-Brexit of thousands of pounds worth of British goods rotting on quaysides in European ports because of incomplete paperwork is a situation that we hope will be well resolved when those channels of trade are once again required. Those processors with European market interests will be keen to retain their customers and to encourage buyers, many of whom they have worked with for years, to continue to 'want and value' our product. FSS has played a vital role in making sure that the sector is well briefed on what is required for export, and Scotland Food and Drink is clearly on the case with regard to other Scottish food interests and keeping the European door open.

SCOTTISH VENISON UPDATE

Alternative routes to market and reducing food miles are areas where the Scottish Government is especially in favour and a small sub-group has been working on how to further develop the legal, safe short supply chain from stalker/estate into local markets.

A number of estates were already doing this pre-Covid and the pandemic has encouraged others to invest in this approach. This should complement existing channels of volume supply to wider markets through AGHEs. It is an exercise in identifying the bottlenecks, for example a lack of processing and butchery, skills shortages, chill facilities, funding or a combination of all of these.

What is certain is we have available product, we have a market, and some excellent examples of where the short supply chain is working and working well so that is a good place from which to start.

There are a lot of people and businesses involved in the Scottish venison sector who have made considerable additional commitment and effort to work through this crisis, and we are not out of the woods yet. They have invested in their businesses, made changes to comply with Covid-19 safe working rules, upped their marketing and promotional activity, explored new channels of trade, sacrificed margin to discount and generally done their utmost to keep supply chains moving.

If we use the current situation and resources that we have wisely we can, I think, come out of this stronger and in a better position to build on Scottish venison's profile and success as and when the markets that are closed re-open and the feelgood factor returns, as it will, in time.

Non-lead ammunition

Non-lead ammunition is another crucial consideration for those who have not already switched. This requirement is coming fast, and soon, and the market will dictate what it wants and deems safe. We are told that lead free will be a pre-requisite to continue to have access to certain important channels of trade and no lead, full stop, will ultimately be the default position across the board.

With Brexit, volumes of European legislation became UK law including the Registration, Evaluation Authorisation and Restriction of Chemicals (REACH) and those exporting into Europe will have to comply with the REACH regulations from 1 January. The lead ban was however not published as EU law before REACH was adopted so this might be seen as something of a let-off. Some organisations are promoting a 5-year transition but the view of game processors servicing major retail clients is that the non-lead requirement will happen far sooner than that.

Jamie Hammond, Wildlife Management Officer, NatureScot, says:

"The bottom line is that there are now good alternatives to traditional copper jacketed lead bullets on the market at a competitive price for the mainstream calibres in terms of function, expansion, terminal ballistics and accuracy that result in a humane kill. Stalkers who have not yet switched should try what is available and see how it performs for them. We recognise that the .243/100gr legal minimum requirement is still a blockage, but work is on the horizon to remedy this."

A Wild Game Guide for Scotland

Scotland has historically shared the Wild Game Guide with the rest of the UK. Produced by the Food Standards Association this has contained anomalies with regard to Scottish wild game, not least that Scotland has separate legislation for deer and the requirement in Scotland for a Venison Dealer License at some point in the supply chain to the customer.

Food Standards Scotland has taken on the production of a new and separate Wild Game Guide for Scotland with the first draft out for consultation before Christmas. ADMG, the Scottish Venison Association and other organisations with an interest in deer and venison have responded to that.

In addition, the offer has been made for one or more from the sector to be closely involved with FSS in the production of its second draft. All feedback suggests that the guide should give absolute clarity on legal and food safety requirements for taking venison to market, whether in volume or for smaller numbers of carcasses. The guide should also make very clear what the derogation for small quantities does and does not permit.



It is vital that all routes to market for venison are safe, transparent and legal, that product is traceable, and that those putting venison into the food chain are accountable and recognise and understand their responsibilities. In these respects, it is important that the new Wild Game Guide when published sets out these steps and obligations with absolute clarity.

Everyday's a VERY VENISON occasion!

SCOTTISH-VENISON.INFO



A very venison occasion

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The campaign aims to drive growth in the UK venison market, and Scottish venison's share of that, by raising awareness and encouraging occasional consumers of venison to eat more of it.

We are doing this by showing the versatility of venison and linking it to everyday reasons for celebration. The campaign line is "A Very Venison Occasion".

The creative format running online in paid-for media from 1 March (postponed from December because of lockdown) is a series of short, 15 second videos around creating venison dishes for "everyday occasions". Additional creative content materials are available in a toolkit for use by industry members to add weight to the paid for activity.

The campaign is targeting two core audiences, an older upmarket demographic and a younger, open minded "foody" audience. It focusses on London, the south of England and Scotland and will run for approximately six weeks.

The video ads will run as InRead content across a premium portfolio of relevant online publishers eg Telegraph, Times, Spectator. InRead means the ads will play within the copy of articles or before news video content. There are three approaches, and these will be optimised as the campaign progresses.

These include:

1. Nielsen 1st party data to tap into the core target audience (60+, upmarket, food/drink interest)
2. "Food Interest" site list to ensure we appear around relevant high-end content
3. A contextual strategy surrounding "Food & Recipe content" to attract a broader foodie audience and users looking for inspiration

While the media budget is modest we are hoping to achieve:

- 1,250,000 impressions (the number of times the video ads are displayed)
- 250,000 video completes (ie viewing ads from start to end)
- 3,750 click-thrus to the Scottish Venison website

This is an exciting addition to the limited and free channels that we have to spread the word about Scottish venison. It is more than the sector has ever had at its disposal to spend on telling the UK foremost about our product. Whilst we have nowhere near the budget of a Scotch Beef PGI or Scotch Lamb PGI campaign our targets are considerably more modest. Online advertising, with which we are all becoming increasingly familiar, is a tremendous, flexible and dynamic medium to allow us to get that message across.

The Scottish Venison Association is grateful to SAOS, Scotland Food & Drink Partnership, and the Scottish Government in enabling this campaign.

Sixty Glorious Seasons

The memoirs of Finlay Mackintosh, a Badenoch Stalker 1883-1966

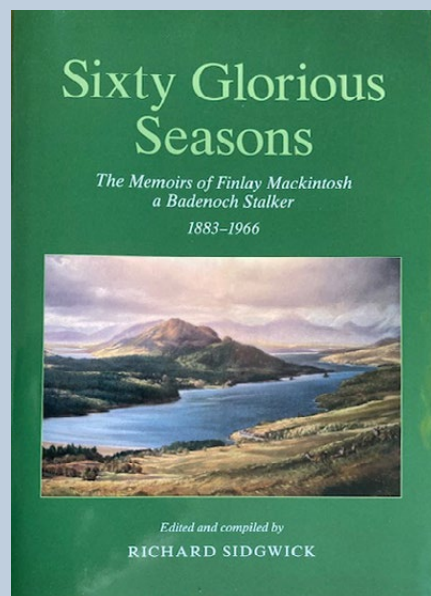
by Richard Sidgwick

A review by Richard Cooke

At a time of unprecedented change in the deer world which now finds itself with an important role in contributing to the delivery of climate change and biodiversity policy in Scotland, it is important not to lose sight of the cultural heritage of deer stalking over recent centuries. Nothing exemplifies this better than these engaging memoirs written by a remarkable man at a time when stalking without modern aids often involved almost superhuman feats of endurance and embodied the inseparable relationship between man and our largest mammal. Finlay Mackintosh's love for the red deer shines through his writings.

Although he tells us nothing of his service with the Lovat Scouts in the Great War, or of his achievements as a competition rifle and clay shot, or indeed of his family life, we hear of that through Andrew Feilden's affectionate foreword, his detailed descriptions of his days on the hill are wonderful and the account of his interlude in India as the guest of the Maharajah is a fascinating story in itself.

Richard Sidgwick in his careful and respectful compilation of these memoirs, with an equally compelling extract from the earlier memoirs of William Colley as an appendix, has captured a world which has changed but not disappeared.



I personally believe that deer stalking in the traditional manner, not very different from a century ago, if somewhat less demanding, will continue into the future alongside the diverse new demands of sustainable land management. There is a place in today's Scotland for the remaining deer forests and for the successors of Finlay Mackintosh and William Colley.

I found this book unputdownable and I know that others will too. It deserves a place on the bookshelves of any lodge alongside the stalking classics.

The Memoirs of Finlay Mackintosh is available by mail order from the author at a cost of £25 plus £6.50 p&p.

E: rts@milestonehill.com

Patrick Gordon-Duff-Pennington

As will now be widely known, we sadly lost Patrick Gordon-Duff-Pennington on 9 January 2021, a few days before his 91st birthday. Many of us in the deer world will have known Patrick personally. He knew everybody, stalkers, farmers, crofters, landowners, country folk, and had sat in kitchens all over Scotland, drinking tea or a dram and sharing the craic.

He was a giant of his time, involved in everything rural and, at one time or another, leading many of the rural organisations. I remember him for his wise and kind support as an ADMG committee member from our inception in 1992 until he left to take up the Chair of the Red Deer Commission. He had kept in occasional but regular touch over the years wanting to know how things were going with the deer and with deer politics. Deer were among his great loves as is lyrically demonstrated in his poetry. Who can forget 'Children of the Mist' recited by the author himself to the annual RDC gathering at Drumossie?

'Patrick of the Hills' will be sorely missed like few others. I am sure all join me in appreciation of a lifetime of committed service to the deer people of Scotland and to the deer.



A full obituary as published widely across the media can be found [here](#) from the News & Star.

Richard Cooke



Deer management territory in southern Norway.
Photo: Richard Cooke

Social constraints in cross-boundary collaborative deer management

The study below published in *Society and Ecology* researches collaborative deer management approaches in southwest Norway, often cited as an example where lessons can be learned for deer management in Scotland. This work is free to access and reproduced under the relevant [Creative Commons License](#).



Dr Katrin Prager, Geography and Environment, School of Geosciences, University of Aberdeen

The complex interactions between different spatial, temporal, and functional scales in social-ecological systems are recognized as a key challenge in sustainable management of natural resources. We analyze scale mismatches using the example of migratory red deer (*Cervus elaphus*) management. Hunting practices and organization of hunting are shaped by the social and institutional context rather than the biology and space use of the species. The collaboration among landowners across property boundaries is a potential solution to address scale mismatches but a number of social constraints need to be taken into account.

Based on data from a survey of attitudes and perceptions of 509 Norwegian landowners we found a number of social constraints including differing interests and objectives for deer management, land tenure arrangements, weak links between actors at different levels, lower satisfaction with current deer management and cooperation at the higher (municipality) level, information asymmetry, and different perceptions of benefits and costs of cooperation. For example, 73% of respondents were satisfied with current management at the hunting field level (smallest management unit) but only 43% at the municipality level, which represents unit sizes necessary for deer management at the population level. Seventy percent of respondents hunt mainly for enjoyment and meat whereas 30% hunt to reduce crop damage; hence aggregation into larger management units may increase internal conflict among landowners with different objectives.

Our results suggest that coordination of management across property boundaries is a more realistic aim than merging of units. Given that income from hunting in Norway is generally low, we anticipate that financial incentives are unlikely to have a large impact on landowners' willingness to cooperate.

Instead, we make suggestions for enhancing existing nested governance arrangements and institutional interplay to support scale alignment by means of developing shared management objectives, and creating learning and knowledge sharing opportunities facilitated by an intermediary.

<https://www.ecologyandsociety.org/vol23/iss4/art29/>

This study was funded by the Norwegian Research Council as part of the Deer Unit project (Grant number 230275). We are very grateful to all landowners who took part in the survey. We would also like to acknowledge comments from Vebjørn Veiberg on a previous draft.

Prager, K., A. Lorenzo-Arribas, H. Bull, M. Slaaen Kvernstuen, L. Loe, and A. Mysterud. 2018. Social constraints in cross-boundary collaborative deer management. *Ecology and Society* 23(4):29.

Dr Katrin Prager

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What is Biodiversity Net Gain and why should we be assessing it?

Photo: Dick Playfair



Dr Nick Hesford, Advisor, Game & Wildlife Conservation Trust Scotland

The term 'Biodiversity Net Gain' will be familiar to anyone involved in the land and wildlife management sector, and one

that has gained increasing traction with policy makers in recent years. Broadly speaking, Biodiversity Net Gain is an approach to land management that leaves our wildlife and their habitats in a better state than before. This approach is at the heart of what the Game & Wildlife Conservation Trust (GWCT) does - we have been at the forefront of promoting best practice game and wildlife management as a force for nature conservation and environmental improvement on farmland, woodland, moorland and wetland for over 80 years. Our aim? To produce a thriving countryside rich in game and wildlife.

Through our research, GWCT has demonstrated that good management of our natural environment can lead to significant knock-on benefits for a wide range of wildlife. From declining wading birds, like the lapwing and curlew, that benefit from the management of our upland estates, to improved species diversity in our lowlands as a result of habitat creation for pheasant and partridge releases, game management can deliver a net gain for biodiversity.

Nevertheless, bad wildlife and habitat management can negate the good work done by those 'working conservationists', our private land managers who are pioneering wildlife-friendly management in a productive countryside. Increasing concerns about the potential ecological consequences of how our countryside is managed means that there is, now more than ever, pressure on land and wildlife managers to demonstrate evidence of sound management – this is something we call 'Best Practice with Proof'.

The GWCT now offers a Biodiversity Assessment Service to help estates, farms and land and wildlife managers to highlight where current management is benefitting biodiversity, identify where there is potential for negative impacts on wildlife, and help develop practical solutions and remedial actions that are sensitive to the needs of the land managers. Delivering Biodiversity Net Gain must work for the practitioner as much as it does for the politicians and conservation NGO's.

We take a holistic view on assessing biodiversity, with each assessment tailored to the individual requirements of the estate, farm or shoot. Our approach is to provide a qualitative ecological appraisal of habitats and their condition whilst assessing the various aspects of estate management, to identify areas of good practice and to make recommendations for future improvements.

We first identify those species and habitats that are already supported by current management and then identify what wildlife could be encouraged through adopting small changes to management in the future. As every estate or farm is different, so too does our level of input vary, from broad ecological appraisals to providing support with long-term biodiversity monitoring and habitat impact assessments. However, our aim in each case is to work with landowners and managers to provide evidence of good practice and to help to produce an action plan for future conservation management.

It is likely that future financial support for the land and wildlife management sector, whether in the form of public payments from Scottish Government, or from private investment, will be conditional on demonstrating the outcomes of good practice. In a climate where land and wildlife managers are facing increasing political pressure and opposition from stakeholders, Best Practice with Proof will have increasing relevance, and the ability to demonstrate Biodiversity Net Gain will be an essential element of future proofing within this sector.

For further information please contact Dr Nick Hesford: nhesford@gwct.org.uk.

Cairngorms Connect

A partnership in land management and nature-based solutions

Jeremy Roberts, Cairngorms Connect Project Manager
Chris Donald, NatureScot Area Manager, South Highland

The origins of Cairngorms Connect can be tracked back to the success of Wildland Limited and the Steering Group members in delivering the objectives of the Feshie Catchment Section 7 Control Agreement during 2000 to 2010. At the conclusion of the Control Agreement all parties agreed that we had a responsibility to ensure that improvements to habitat and the wider ecosystem were not lost and were motivated to continue with the hard work and investment of the previous 10 years.

As a result, Glen Feshie Estate and NatureScot (then SNH) continued with a partnership arrangement to ensure that the essential tools for effective deer population control and monitoring were in place. At the same time, parallel work to reduce deer numbers for ecological restoration was taking place at the National Nature Reserves at Abernethy and Glenmore. Reporting our work as individual members of the Cairngorms and Speyside DMG, and informal discussions in the margins, led the four partners to develop their ideas of partnership as we shared our knowledge, took into account the climate crisis and information on biodiversity loss by re-evaluating our objectives and also the direction of travel set out by Scottish Government guidance and targets.

The partnership was formerly founded in 2014 and established a Memorandum of Understanding in 2016. The four partners: Wildland Limited (private), RSPB Scotland, Forestry and Land Scotland and NatureScot collectively manage 600sq km of contiguous land within the Cairngorms National Park. This is currently the largest habitat restoration project in the UK. The Cairngorms National Park Authority is a supporting partner.

How we work together

The partners are represented by senior staff at all meetings and have met (almost continuously) on a monthly basis since inception and during the COVID crisis virtually. It is key that the partner representatives can make decisions on behalf of their organisations in terms of budgets and staff resources. Applying the principles and disciplines of the 'Ecosystem Approach' is at the heart of our activity and decision making and it is important to make clear at this point that our focus is mainly on habitat restoration. What this means in practice is that in our collaborative work we don't get too distracted by detailed management for individual species which would lead us away from wider ecosystem restoration. This does not mean we do not consider species, and in fact wildlife management and in particular deer management is the most significant management prescription we all employ. Also, each individual partner does have the flexibility to pursue their own areas of interest or projects – the partnership provides a framework and working model for us to explore and realise collaborative opportunities.

Our Vision

By 2065, with the exception of on-going herbivore control, all of the principal interventions for ecological enhancement are complete. More natural characteristics are principally being achieved by natural processes. Programmes of tree-planting, ditch-blocking, floodplain restoration, and peatland restoration are complete. The emphasis of the project is now on monitoring, research and promotion/publicity/ demonstration.

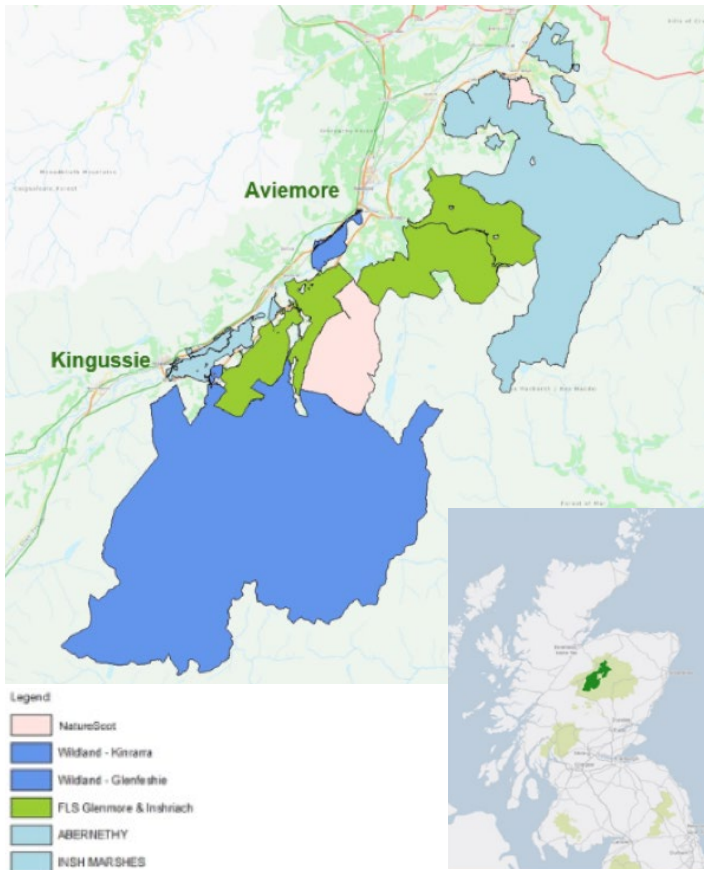
By 2216, Cairngorms Connect's woodland habitats are the best examples in NW Europe of an oceanic boreal forest. The forest has extended well towards its natural altitudinal limit, including montane scrub which has become well-established across the montane ownership of the partnership. This has been achieved principally by natural regeneration, in the presence of grazing animals. Limited planting has been used to establish seed-sources for under-represented tree and shrub species, which have become well established. These woodlands, including some plantation areas, have a high degree of naturalness characterised by structural variety and high deadwood content. Wetlands have water tables at near-natural levels, and attributes of more-natural floodplains and hydrological systems, are well-established. Peatland habitats have recovered from the impacts of historic grazing and subsequent erosion. There are no longer extensive areas of 'hagging'; the blanket bog is actively building. Invasive non-native species are rarely recorded in the project area.

The vast area covered by the partnership is internationally recognised as a success in landscape-scale restoration. More importantly, its value for rare and diverse wildlife, spectacular landscapes, sustainable recreation, and for delivering a wealth of well-understood ecosystems services is appreciated by many of those who live near, work in, and visit the Cairngorms Connect partnership area. For those willing to take a sustainable approach to agriculture, silviculture and deer management, there are opportunities to make a modest living from the land through small-scale, low intensity farming and forestry enterprises.

Partnership attributes

There are 11 attributes of the Cairngorms Connect project that make it a particularly significant restoration project:

1. Four committed and visionary land managing partners – willing to devote the time to make it work; to meet frequently; to be open, honest and challenging, and able to make decisions.
2. A 200-year, shared vision.
3. Partners with a good restoration record – some going back 70 years.



4. Scale - 60,000ha - The biggest habitat restoration project in Britain
5. Connected, contiguous.
6. Single catchment – the project area is entirely within the catchment of the River Spey (Scotland's second biggest river) and comprises 20% of the catchment area.
7. Altitudinal range – from 200m asl to 1,309m asl – the summit of Ben MacDui, Scotland's second highest peak.
8. Habitat diversity and quality.
9. Species diversity and rarity – over 5,000 recorded species, of which 20% are Nationally Rare or Scarce. In 2016, 50% of Scotland's male capercaillie were found in the forests managed by the partners. The area has 11 species of regularly breeding raptors, in a diverse 600sq km landscape, free from persecution.
10. Large-scale restoration potential.
11. Good financial support – a combination of good investment by the individual partners, support from the Endangered Landscapes Programme (2019-2023), and grant aid from Scottish Forestry, Scottish Government Peatland Action Fund, the EU LIFE programme, and support from the CNPA, as well as some private/individual funders

Our immediate priorities: the 5-year plan

1. Habitat restoration:

- a. General reduction in impacts of deer grazing through collaborative deer management across 60,000ha.

b. Restoring forest habitats:

- i. Improving quality of existing forests (13,000ha):
 1. Scots pine plantation restructuring.
 2. Non-native conifer removal.
 3. Reduction of fragmentation and disturbance.
 4. Removal of redundant infrastructure.
 5. Planting seed sources of under-represented species.
- ii. Expanding forests to their natural limit, including montane woodland at ca. 900m asl (ca 13,000ha potential new woodland).
 1. Primarily by natural regeneration.
 2. Planting seed sources of under-represented species.

c. Restoring peatland habitats (total 10,000ha):

- i. Blanket bog restoration.
- ii. Bog woodland restoration.

d. Restoring rivers and floodplains (approx. 1,000ha):

- i. Removing obstructions for migratory salmonids.
- ii. Restoring natural river morphology.
- iii. Restoring natural hydrological processes to floodplains.

2. Reducing biodiversity loss

3. Delivering Ecosystem Service benefits, in particular:

- a. Contributing to net zero targets by:
 - i. Reducing carbon emissions (e.g. through oxidation of peat).
 - ii. Increasing carbon sequestration in woodlands, peatlands and coarse vegetation.
- b. Adaptation to likely impacts of climate change.

4. Communications and involvement

- a. Building understanding and awareness of the importance of the partnership area, amongst communities of 'place' and 'interest', including local communities and visitors.
- b. Building understanding and value amongst local businesses.
- c. Providing opportunities for involvement, as volunteers, interested members of the community, direct employment, contract work, and study.
- d. Enable active engagement in planning land management decisions, in accordance with guidance from the Scottish Land Commission.

5. Skills development – through a restoration apprenticeship programme.

6. Monitoring outcomes

7. Testing new interventions

For further information contact:

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Chris Donald: chris.donald@nature.scot

Study identifies risk factors associated with presence of Shiga Toxin-producing *Escherichia coli* (STEC) in wild venison carcasses

Tom McNeilly and Beth Wells, Moredun Research Institute

Shiga toxin-producing *Escherichia coli* (STEC) bacteria are an important cause of human disease through the production of Shiga toxins (Stx) which cause bloody diarrhoea and, in more severe cases, potentially fatal kidney disease.

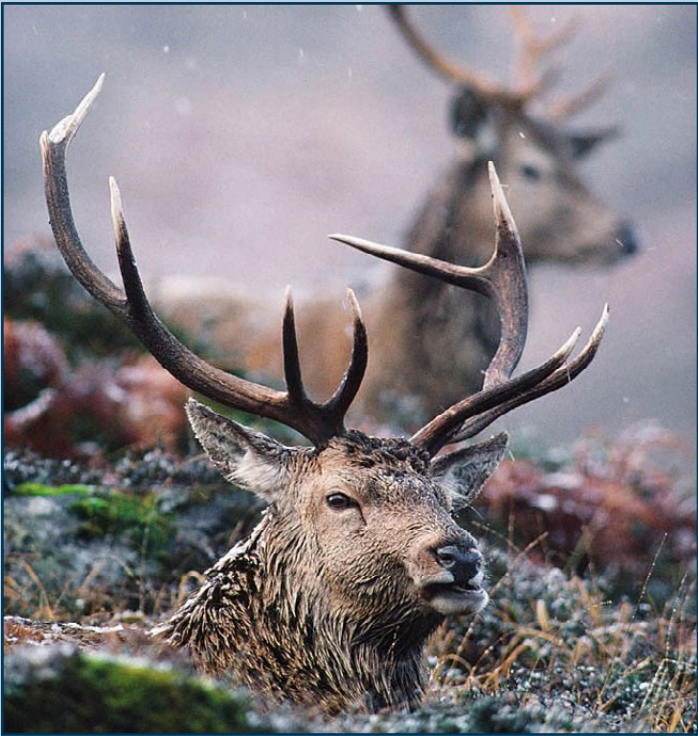
Ruminants, which are the main source of infection, can be infected and shed the bacteria in their faeces without showing any signs of disease. Human infections occur following contact with faeces from infected animals, for example, through handling infected animals or eating milk and meat contaminated with faeces.

Of the ruminant species infected with STEC, cattle are thought to be the main source of human infection. However, an outbreak of human STEC infections in October 2015 associated with wild venison prompted Food Standards Scotland (FSS) and the Scottish Government to commission research into STEC in wild deer. This research aimed to determine how common STEC infections are in Scottish wild deer and to identify risk factors associated with bacterial contamination of deer carcasses. This work was led by the Moredun Research Institute together with the University of Edinburgh and had significant assistance from the Scottish deer industry and Forestry and Land Scotland.

The results from this study showed that the prevalence of the most important type of STEC, STEC O157, in wild Scottish deer is low, with only three out of 1087 faecal samples being positive for the bacteria. However, levels of the bacteria were high in the three positive samples and further analysis showed that the types of STEC O157 strains found were associated with more severe forms of human disease. This indicated that there is a low but real risk of wild Scottish venison becoming contaminated with STEC types which are dangerous to humans.

With this in mind, the next phase of the project, led by the University of Edinburgh, focused on identifying the stages of wild venison production which pose the greatest risk of STEC contamination of the carcass. Initially, a comprehensive review of existing evidence from the scientific literature was performed. This identified that carcasses from deer in poor health were more likely to be contaminated with STEC and that good hygiene practices and maintaining carcasses at temperatures below 7°C were critically important in reducing levels of bacterial contamination.

The literature review was then followed by field studies involving sampling of wild deer carcasses at all stages of venison production, from culling to end-product, to determine levels of gut bacteria (as indicators of potential STEC contamination) on the carcass during different processing stages and under different environmental conditions.



Field studies found that carcasses with high levels of visible faecal contamination, those that had been stored for longer than a week and those transported longer distances between cull location and Approved Game Handling Establishment (AGHE) were more likely to be contaminated with gut bacteria. Furthermore, warmer environmental temperatures (above 7°C) were associated with higher levels of gut bacteria on carcasses. Reassuringly, it was also shown that correct processing of carcasses according to procedures laid down in Best Practice Guidance can keep levels of bacterial contamination low and to a standard suitable for human consumption.

The results of the risk factor analysis have had real impact, being used to support Best Practice Guides for wild venison production. These studies would not have been possible without significant support from the deer industry, including ADMG members and AGHE owners, and are a great example of successful collaboration between academics, industry and government agencies. We would like to thank all our industry collaborators for their assistance with this project, as well our funders, FSS and the Scottish Government.

Further information can be found in the final project report >>

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