Letting the cat out of the bag: Eurasian lynx reintroduction in Scotland

Conservation, game and land owning bodies have recently been discussing the conditions for any future reintroduction of lynx to Scotland. This article considers the debate amongst organisations who would be central to the possible return of the lynx.

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In August 2011 it was announced that Mar Lodge estate, managed by the National Trust for Scotland (NTS), could face financial penalties from Scottish Natural Heritage for failing to curtail its deer population to predefined targets.[1]

As the Scottish Government drives home plans to increase national forest cover from 17% to 25% by 2050, NTS is unlikely to be the only landowner facing such penalisation. Naturally, many groups oppose the aggressive deer culling tactics required to enable native forest regeneration to take place, on ethical as well as economic grounds. The Scottish Gamekeepers Association is demanding to know how rural communities, dependent on red deer populations to feed their fragile stalking industry, are supposed to get by as a result.[2] While emotions run high, a handful of land management organisations have recently begun to contemplate an alternative way forward.

Bringing back the lynx – the human perspectives

The ecological feasibility of reintroducing the Eurasian lynx to Scotland has been expressed by a number of scientific experts in recent decades. Meanwhile the case for returning large carnivores has ignited debate about the relationships we have with a range of predator species both present and extinct.[3] But in contemplating the practicalities of returning any large mammal to Scotland, have the relationships between different user-groups of the countryside been overlooked?

Through my dissertation at Edinburgh University I hoped to offer a springboard for different stakeholders to express their views about lynx reintroduction. Many of the interviewees that took part in my study later shared their perspectives at a symposium at the university. First to present was David Hetherington of the Cairngorms National Park Authority who had previously studied the feasibility of lynx reintroduction in Scotland at the University of Aberdeen. By calculating the amount of suitable habitat and the availability of natural prey for reintroduced lynx, he proposed that Scotland could accommodate up to 450 lynx. He then declared honestly: "Lynx do eat sheep. They can kill them and they do kill them".

Sheep left to graze in open forest are most vulnerable to lynx predation. This extraordinary image, captured by Norwegian sheep farmer Jostein Hunstad, shows a lynx attempting to steal one of his lambs. Hunstad managed to spook the ultra shy predator with the sound of his voice, rescuing the lamb to safety.

Photo: Jostein Hunstad

In continental Europe, the number of sheep predated by lynx can vary significantly depending on the method of animal husbandry in use. Norwegian farmers for example, who allow their sheep to graze in communal areas of forest during the summer, routinely experience losses of between 5,000 and 8,000 sheep.[4] In Switzerland, however, where sheep are normally grazed on open pastures, its estimated population of 120 lynx typically take between 15 and 40 sheep each year.[5]

Sheep security

Alex Hogg, Chairman of the Scottish Gamekeepers Association, spoke at the symposium of his sense of doubt over the lynx's potential predatory habits contending: "there's hardly a field without a wee bit of woodland around it. I don't know about lynx, but this might just be Bed & Breakfast for them if they were wild in Scotland". Alex expressed some of the difficulties inherent in returning an apex predator into the highly managed landscape which Scotland has become. Despite a general aversion toward the idea, Alex proposed that a small number of lynx might be placed in a large fenced off area of land, allowing tourists the chance to catch a glimpse of one.

Whilst Alex's comments are no doubt constructive, they are a nod in the direction of Paul Lister's plans to erect a 37mile long, 8 feet high electric fence around the perimeter of his Highland estate to hold wolves, lynx and bears. In 2005, Lister upset a range of recreational users of the Highlands, who interpreted his proposals as a violation of their hard earned Right to Roam detailed under The Land Reform (Scotland) Act 2003.[6] Attending the symposium from Scottish Government's Rural & Environment Directorate, Hugh Dignon brushed away any Alladale-type suggestions concluding "We don't consider that to be a proper reintroduction I should say, it's a zoo project, as far as I'm concerned".

Next to present was Douglas Richardson, Animal Collection Manager at the Highland Wildlife Park. He spoke about the role which old and new technologies might one day play in allaying some of the concerns raised already by Alex Hogg. Douglas empathised with the difficulties associated with managing elusive predators in the wild and described how a GPS device with an inbuilt anaesthetic delivery system within the collar could provide some peace of mind for a range of stakeholders during a trial reintroduction. As with the reintroduction of the red wolf into the US state of North Carolina, any lynx fitted with such a collar during a trial could, in theory, be knocked out at a touch of a button.

Chairman of the Slovak Wildlife Society, Robin Rigg travelled all the way from Slovakia to deliver his presentation. During the last 20 years, Robin has worked

with a number of livestock farmers in the Tatra Mountains, implementing a range of non-lethal measures to mitigate conflict between humans and large carnivores. Rigg believes that the potential level of disruption caused by any reintroduced lynx in Scotland is likely to be negligible: "Based on interviews with livestock owners and shepherds, we estimated that wolves kill something like 1600 sheep a year, bears around 300 and lynx around 4 or 5… So really it's totally insignificant in Slovakia"

Major highway and infrastructure developments brought about by its induction into the EU have transformed Slovakia's image as an untarnished wilderness area, but the country has still managed to retain a healthy population of lynx. Rigg contended that Slovakia arguably constitutes a human-modified landscape comparable to that of Scotland's today, with well over half the country's landmass under agricultural management. But in spite of their resemblances, David Hetherington felt that the Slovakian experience of lynx-livestock predation was an "absolutely optimal" scenario and estimated that losses in Scotland were more likely to be in the region of 50 and 400 sheep a year.

Richard Morley, Director of the Wolves & Humans Foundation, said his charity would be prepared to set up a fund using private donations to compensate for any losses to livestock in Scotland. David Hetherington suggested that a pro-active system of financial compensation, currently used in Sweden, would arguably yield the most economically sustainable results. Authorities in Sweden offer farmers annual payments for having lynx present on their land, regardless of any predation, so that farmers benefit economically from the presence of lynx in their area. As losses are not compensated for, the impetus lies with them to shield any vulnerable livestock from predation.

A Licence to manage or to kill?

Attending the symposium discussion was Doug McAdam, CEO of the influential landowner group Scottish Land & Estates. In 2008, the organisation helped Scottish Natural Heritage to establish the National Species Reintroduction Forum, offering stakeholders an arena to voice their perspectives long before licences are granted by Scottish Government. Doug agreed with suggestions that a pragmatic Exit Strategy would be a necessary component of any serious reintroduction proposal, but felt that more thought could be given towards policies that dictate their capacity to manage the impact of existing species: "The experience that we've had to date with some of these reintroductions is that these reintroduced species are here now, consultation beforehand was very poor, the process was not transparent and not inclusive. These protected species are now having very significant impacts on people who live and work in the countryside and we have no tools to deal with that."

The "tools" that are referred to here are culling licences issued by SNH under the Wildlife & Natural Environment (Scotland) Act 2011. They allow gamekeepers to deal with problematic species, normally protected by law, which are significantly affecting their stock. In Switzerland compromises have been made to allow a range of strictly protected predator species, including the lynx and the grey wolf, to be controlled. Qualified state gamekeepers are invited to remove, under licence,

'problem' animals which have been shown to have killed numbers of livestock above a set threshold. Such a management strategy could be welcomed by some people in rural communities who may be nervous about having an unfamiliar, large carnivore around.

Unlike Switzerland which is not part of the EU, Scotland would have to conform to the Habitats Directive which grants the Eurasian lynx strict protection status under European law. As an endangered species, the lynx's categorisation under Annexe IV of the Habitats Directive currently presents an obstacle in the minds of those who wish to exercise a greater degree of control over species reintroduction projects in Scotland.

How wildlife enthusiasts will respond to talk of killing an endangered predator is another matter of contention. But there is a growing consensus among wildlife

Photo: Tourist operators in Siberia, such as Hunt-Russia, currently charge their clients $4,700 to hunt a single Eurasian lynx.
Photo: Hunt-Russia

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managers that the lethal control of problematic predators in founder populations could be an essential tool for ensuring their successful reintroduction. If carried out strategically over extended periods of time, lethal removal can help managers select against depredation behaviours in predator populations.[7] Excessive concern for a particular individual animal, or public distaste towards a particular management technique, can be indulged at the cost of a species' national reputation and subsequent recovery. This is known as social carrying capacity.

Taking the proposed policy step in his stride, Donnie Broad, a member of the Scottish Gamekeepers Association, spoke with some optimism for future lynx management prospects. In addition to the 1,500 acre Pitcastle sporting estate in Perthshire which he manages, Donnie takes care of 20,000 acres of farmland in Glenlochay in the Central Belt. He agrees that the ability to deal with problematic lynx would be his priority. Whilst Donnie explained that he was pro lynx reintroduction, he suggested that the breed of livestock threatened by predation would be an important factor in determining other landowners' attitudes towards the idea: "We've got 2,600 breeding ewes on the open hill in Glenlochay, so losing one of them to a lynx now and again is insignificant compared to losses to weather and existing predation. But if you've got a pedigree flock outside Perth with a hundred sheep, losing one of them to lynx is indeed something… It's proportional."

In order to understand how conflicts might develop with different varieties of livestock in Scotland, it's widely accepted that a trial reintroduction of lynx would ultimately be required. During a previous interview I conducted for my dissertation, Drew McFarlane-Slack of Scottish Land & Estates suggested that a series of trial reintroductions could take place at the same time as each other, with communities and stakeholders directing the research activity. McFarlane-Slack suggested that lynx behaviour would need to be scrutinized against a wide variety of social factors, including higher human population density and higher road density towards more urbanised parts of the Central Belt.[8]

The US Department of Agriculture has recently set up the Wildlife Service's National Wildlife Research Centre, a federally managed facility dedicated to resolving conflicts between people and wildlife. Scotland might require a facility of this kind to provide an initial testing ground for examining the effects of returned lynx. Among the technologies tested at the National Wildlife Research Centre in Utah is the Electronic Guard. To deter predators from livestock rearing areas this device emits colourful strobe lights and warning sirens from its programmable MP3 player. Although the technology appears to be a positive development, John Schivik reports that intelligent predators have learnt to perceive the threat as harmless and advocates greater success with the use of livestock guarding animals.[9] Touching on this subject, Douglas Richardson warned the symposium audience of hikers being attacked by Livestock Guarding Dogs on the continent and promoted llamas and donkeys as a safer, more effective option.

In the United States guard llamas are seen as a low maintenance, non-lethal alternative for mitigating livestock predation, requiring little training and care in

Guard Llamas can be very loyal to their flock of sheep. In America they will defend livestock from cougars and coyotes. Llamas can live for many years and do not require additional feeding. In Belize, donkeys have been used with great affect to warn off jaguars.

Photo: Laura Jennings

comparison to Livestock Guarding Dogs. Studies carried out on farms in Utah found that average rates of sheep predation due to coyote attack fell from 8% to 1% after the introduction of a Guard Llama to repel predators such as the coyote, with more than half of farmers having their livestock losses reduced to zero.[10] Encouraging conservation NGOs and farmers to work alongside each other in this way as they test the effectiveness of old and new technologies could be important way of establishing trust in the process of bringing back a species.

Local communities have a right to be engaged

Contemplating the return of the lynx to Scotland, a government licence would need to be granted to authorise proceedings. Hugh Dignon, the man in charge of facilitating that process, suggested that Ministers' minds are focused at present on the specific reintroductions in progress now, such as the beaver. He stated "there is clearly a role, for groups, for NGOs, for others to keep the subject at the forefront of people's attention". Brushing away claims that government wasn't doing enough to coordinate the process Dignon highlighted the role of Scottish Natural Heritage's Species Action Framework, which currently prioritises 32 native species for wildlife conservation and future reintroduction.

During 2012 groups within the National Species Reintroduction Forum will be able to advise SNH on whether the lynx, amongst other candidate species, should be a species whose reintroduction merits more detailed investigation and discussion. Stakeholders within the forum, particularly those involved in livestock farming, may be conscious of the EU's CAP review coming up in 2013. The restructuring of agricultural subsidies will soon determine Scotland's ability to embrace a burgeoning global demand for meats such as lamb. But while NFU Scotland will have a chance to convey its opinions on the matter, what about the increasing swathes of people raising the odd hen or pig in their back gardens? According to Drew Mcfarlane-Slack, Highlands Manager of Scottish Land & Estates: "Having a lynx would provide a new top-range predator and that would have to be factored into the way stock is managed… Increasing numbers of people are keeping domestic chickens and ducks, geese and the like, all of these would become potential targets… chicken farmers for example would probably need to increase the security of their premises to deal with that".[11]

Support and advisory schemes will have to be developed long in advance to ensure that rural communities are properly equipped to share their territory with the lynx. For instance the Florida Wildlife Commission (FWC) employs a team of rangers to help people know how to respond to encounters with the likes of a cougar. Another key responsibility of the FWC response unit is to share knowledge between residents, including how best to protect domestic livestock from predation.[12]

An enclosure in Germany's Harz National Park containing a habituated lynx that is unsuitable for release into the wild.

Photo: Harz National Park

Prepare to be surprised

Some scientists have suggested that lynx should be fitted with global positioning system (GPS) devices to monitor and protect them in the wild. Recent revelations about the widespread use of GPS jamming technology throughout the UK[13] make me question how sensible that might be though, both logistically and economically. When powerful jamming equipment was deployed during Europe's largest joint military exercise in 2011 for example, fishermen off the west coast of Scotland found their GPS navigational systems failed to work. The incident followed a report published by the Royal Academy of Engineering warning of the UK's over reliance on GPS.

Despite initial apprehension toward the reintroduction of 20 lynx into the Harz National Park in Germany in 2000, the German Hunting Federation recently declared that a €6,000 fund created to deal with lynx-livestock predation in the region has yet to be exhausted.[14] As a symbol of the iconic species' pulling power, its home territory has being marketed as "The Kingdom of the Lynx" and local hoteliers have reported a 25% increase in revenue due to the area's lynx branding.[15] One of the keys to the project's success is the enclosure for the lynx deemed unsuitable for release. The facility allows people to watch lynx during feeding times, and park rangers can inform visitors about lynx behaviour.

At the symposium it was announced that the Highland Wildlife Park, situated in the Cairngorms National Park, is preparing for the arrival from Sweden and Latvia of two Eurasian lynx of the Northern subspecies, which is considered to be the

appropriate sub-species for reintroduction into Scotland. Douglas Richardson of HWP hopes this will provide a tangible platform for people's engagement on the subject. Being proactive and inviting local farmers and landowners to see first hand the same variety of lynx they might one day be asked to learn to live alongside can surely do no harm, coupled with other measures for people to discuss the merits and the detail of possibly bringing back lynx.

The politics on the ground are in flux, but small partnerships are slowly but surely being forged between landowners, conservationists, ecologists and gamekeepers in contemplating how Eurasian lynx reintroduction might one day become socially feasible. Compared to other reintroduction projects, the lynx has a different rhythm in its stride and I doubt this will go unnoticed by politicians as they prepare to mount the campaign for independence.

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