Background and Experience

I would like to submit a comment on Petition PE01674 (Managing the Cat Population in Scotland). I am a PhD Behavioural Ecologist, in the somewhat unique position of having conducted Trap-Neuter-Return of feral domestic cats in Scotland for both conservation and welfare purposes. I was employed as a Project Officer for the national conservation partnership ‘Scottish Wildcat Action’ between March 2015 and September 2019, where I was responsible for:

- Conducting large-scale surveys of the wild-living cat population across three Wildcat Priority Areas (Strathpeffer, Morvern, and Strathspey), as well as conducting data analysis on the monitoring data from all six Priority Areas.

- Working with local communities and veterinary practices to run responsible domestic cat ownership campaigns (‘Supercat’) to encourage people to get their cats neutered, vaccinated and micro-chipped.

- Managing teams of volunteers to conduct large-scale Trap-Neuter-Vaccinate-Return (TNVR) programmes for feral domestic cats and hybrid wildcats with obvious signs of domestic cat ancestry.

- Assessing and verifying national wildcat sightings (and those of hybrid and domestic cats) from members of the public via online databases (iRecord and subsequently NBN Atlas Scotland).

I have also volunteered with my local branch of Cats Protection since 2017, conducting Trap-Neuter-Return around Nairn, Inverness and Moray. I also used to work for Cats Protection in the south-west of England as an Education Officer responsible for teaching others about responsible cat ownership. This experience has endowed me with a broad knowledge of the scale and extent of the feral domestic cat problem in the north of Scotland.

Finally, I have spent this year travelling across Europe on a Churchill Fellowship (Winston Churchill Memorial Trust, UK), researching the causes of hybridisation between wildcats and domestic cats. I have met with and interviewed over 25 wildcat researchers, veterinary professionals, and those working with domestic cats, in 6 countries with wildcat populations showing varied degrees of hybridisation and visited more than 30 field sites to document the habitats in which wildcats and feral domestic cats live. I have not yet published my report for the Churchill Trust but I can provisionally share some insights from that research that may be of relevance to this petition.

The feral domestic cat population in Scotland: welfare

While travelling in Spain, Portugal and Sicily, I witnessed the scale and extent of the feral domestic cat problem in the Mediterranean, particularly in urban areas. The conditions for these cats can be absolutely appalling, and many British tourists are
aware of the problem abroad because they witness it first-hand. The welfare concerns are obvious: cats hang around the streets and tourist resorts begging for food, looking malnourished and unhealthy and with visible injury or disease. It struck me that if you asked these British tourists, who often try to ‘rescue’ cats from abroad and bring them to the UK, they probably would not consider there to be a problem with feral cats in this country, but they would be wrong. Unfortunately, my experience with wild-living cats in rural areas in Scotland has opened my eyes to the scale and extent of the appalling welfare concerns on my own doorstep. We too have huge numbers of feral domestic cats begging for food and suffering from disease and injury, but they are far less visible. My experience has proven that you generally do not see these cats unless you go looking for them, and I have spent the last four years looking harder than most. It is a statement of fact to say that feral domestic cats are ubiquitous in the north of Scotland; they occur wherever there are people, and in Scotland, people are scattered across the landscape. Those working in rural environments, such as farmers and gamekeepers, are aware of the numbers of feral cats because both engage in lethal control of their numbers. As a Project Officer for Scottish Wildcat Action, I was responsible for collecting carcasses of dead cats (from across the north of Scotland) for genetic and disease testing, and I have witnessed many wild-living cats and kittens that died unnecessarily from horrible injuries, starvation and exposure, and disease.

I have personal experience of both the abundance and mortality of feral cats literally in my own back garden. I live in a rural area a few miles south of the town of Nairn in Inverness-shire. I have lived here for four years, and every Autumn/winter, several new feral cats turn up. I know about them because I put camera-traps out locally for wildlife, or because the kittens appear in my garden. This winter a female feral cat had four kittens at the farm up the road, and I didn’t hear about it until they were too old to socialise and home. Two must have died early on, and the mum disappeared (possibly also deceased). I trapped the remaining two kittens with my own equipment and had them neutered and vaccinated once they were old enough (under licence from Cats Protection). I had no choice but to release them back where they were trapped, and now I put food out for them every day, because otherwise they will not survive the winter. Whilst I have been feeding them, a new feral cat has appeared, and I will have to trap this one too. There is no reason to imagine that the situation is better in any rural environment across the breadth of Scotland: it will very likely be worse, because at least I have been neutering cats as they appear.

The challenges of TNVR

I have conducted TNVR for both Scottish Wildcat Action and for Cats Protection. TNVR is challenging activity, particularly in rural environments. As a Project Officer for SWA, it was my responsibility to both conduct TNVR and to recruit and train local volunteers, which proved extremely difficult. TNVR is extremely time-consuming, resource-heavy, expensive and it can be mentally and physically challenging for volunteers. Cats are one of the most difficult animals to trap, especially when they are not being fed directly by humans, and much preparation and planning often goes into a single trapping event. TNVR must be resourced somehow, and in my experience, this was either through SWA or Cats Protection, who must provide
trapping equipment and pay for the neutering operation, parasite treatment, vaccination, and potentially any other small treatments that are required. TNVR must be coordinated with a veterinary practice in advance as neutering operations must be booked in, and timing of transport to and from the vets must fit with opening hours (often difficult for volunteers with other employment or children). Female cats require somewhere to stay and be monitored overnight, and kittens can require prolonged foster care before and/or after neutering. Trapped cats must be checked to see if they are owned by someone (as technically it is illegal to neuter a pet cat), but this is often very difficult if the cat is not microchipped, and the trapper has to make a decision that could have serious consequences (particularly if the cat is female and found to have been already neutered, or if the cat tests positive for disease and the trapper is then faced with the decision to euthanise). Cats often live in large colonies, particularly on or near farm settings. My SWA colleague in Strathbogie Priority Area conducted TNVR on many colonies, several with upwards of 30 cats, and had to coordinate these efforts with local SSPCA officer and Cats Protection volunteers. I have personally conducted TNR on colonies of 5-10 cats for SWA, and colonies of 20+ cats for Cats Protection. These efforts require significant time and resources. Finally, the weather and landscape in Scotland can present very significant challenges for TNVR, particularly as it is often practiced over winter (when there is reduced risk of catching pregnant or lactating females).

In summary, my experience of TNVR is that it is extremely challenging, hugely under-resourced and that it can never be effective as a measure of feral cat population control without first turning off the tap of domestic cats into the countryside. Despite intensive efforts in wildcat Priority Areas, we were barely able to make a dent in the number of un-neutered feral domestic cats. We learned many lessons, and any future TNVR programmes will benefit from this experience. But the TNVR programme of SWA was not set up to adequately monitor the impact of the work on the feral domestic cat population, and so it is unable to provide comment on the level of success in reducing that population.


The feral cat population: wildcat conservation

In Spring 2018 the SWA Steering Group commissioned an independent review of the status of wildcat conservation in Scotland from members of the IUCN SSG Cat Specialist Group. The report concluded that hybridisation is too advanced, and that the wildcat population is no longer viable and will require reinforcement or reintroduction from captive breeding programmes (Breitenmoser et al. 2019). The author’s caution that “Introduced populations will require management interventions to prevent hybridisation”. Unfortunately, little is known about the prevention of hybridisation between wildcats and domestic cats, and the ecological and behavioural factors which drive cross-breeding are poorly understood.

In March 2019 I was awarded a Winston Churchill Memorial trust Travel Fellowship to travel across Europe researching the drivers of hybridisation in wildcat populations
across the continent. The hybridisation rate varies widely allowing a comparative assessment of the potential causes, such as historic rates of persecution, the distribution of humans and domestic cats, and the quality and quantity of optimal wildcat habitat.

Germany has a very low rate of hybridisation between wildcats and domestic cats, even in human-dominated landscapes. National surveys with many hundreds of genetic samples revealed a hybridisation rate of 3.5% (equating to 3/100 cats showing some level of hybridisation) (Steyer et al. 2018) compared to 100% in the Scottish population. Other European countries have higher levels (e.g. 21% in Switzerland, Nussberger et al. 2014), but none has a hybrid swarm structure i.e. they still have a genetically distinct wildcat population, separate from the wild-living domestic cat population, unlike Scotland which has a genetic continuum between the two (Senn et al. 2018).

The full report of my research findings is not yet available, but I would like to outline some key preliminary outcomes that are of relevance to this petition.

1) Wildcat populations with a low rate of hybridisation are found in:
   a) Large contiguous areas of high-quality deciduous forest (usually beech forest, or oak forest in the Mediterranean) supporting diverse species and abundant small-mammal populations. This habitat is typical of western/central Europe (Germany, France, Switzerland and northern Spain and Portugal, and parts of Sicily). These forested areas are usually in remote low-mountain regions, although many are bordered by agricultural land with human settlement. Wildcats in these habitats often live at relatively high-density, and the main threats to the population come not from hybridisation, but usually from road mortality.
   b) Large contiguous areas of natural scrub and mixed woodland, with high-density rabbit populations and a diverse assemblage of predators, including birds of prey and mammals. Such areas are typical of the central and southern Iberian Peninsula and parts of Sicily. Wildcats may live at relatively lower density than western/central European populations, and primary threats come from anthropogenic mortality and predation or competition from other carnivores.
   c) Protected areas, often IUCN Category II National Parks (particularly in Germany) where most of the land area is left to nature.

2) The distribution of domestic cats is strongly dependent on the human distribution across the landscape. In most of the locations visited, domestic cats live with people in human settlements, and not in wildcat habitat (see for example Ferreira et al. 2011). Humans are usually spatially separate from the wildcat habitat: for example, in Germany and Spain, people live in a clumped distribution, in the towns and villages, and not in the forests. There is spatial separation between the natural wildcat habitat and the humans with their domestic cats. In the Iberian Peninsula, this spatial separation between wildcats and domestic cats may be reinforced by the abundance of meso-carnivores in the wildcat habitat, which pose a direct mortality risk to domestic cats and kittens (Gil-Sanchez et al. 2015).
My conclusion is that in either of these scenarios – large protected areas of diverse natural habitat away from humans and domestic cats, or landscapes with native predators - there exist natural mechanisms that act as physical barriers to keep wildcats and domestic cats separate and thereby reduce cross-breeding opportunity. This is presumably what kept hybridisation levels low or negligible for most of the two thousand years during which time wildcats and domestic cats coexisted in the British Isles before habitat loss and persecution drove them to extinction (or hybridisation). Unfortunately, there is nowhere in Scotland today with enough contiguous high-quality habitat – far enough from human presence – to rely on natural mechanisms to prevent further crossbreeding. The human population in the north of Scotland is scattered across the landscape, throughout any remaining potential ‘wildcat habitat’, and domestic cats with them.

Any future conservation management plans for wildcats in Scotland will necessarily require widespread neutering and vaccination of domestic cats in a way that is not required on the continent because we simply do not have comparable areas of large protected natural spaces where wildcats can live away from people.

References:


