

The Cairngorms Wildcat Project

Annual Report 2010/11



Introduction

In 2007, Scottish Natural Heritage (SNH) included the Scottish Wildcat on a list of 32 species for priority conservation action, which would mean that effort and resources would be focused on its conservation. The first steps to create a wildcat conservation project in the Cairngorms National Park (CNP), an area previously identified as being a stronghold for wildcats, were also taken in 2007, when the Cairngorms National Park Authority (CNPA) added the wildcat as a key priority species to the Cairngorms Local Biodiversity Action Plan. Following on from this, a meeting of potential project partners was called at the CNPA offices in Grantown in September 2007 in order to discuss how best to take forward a conservation project in the CNP. This was attended by representatives of the CNPA, SNH, Scottish Gamekeepers' Association (SGA), and Royal Zoological Society of Scotland (RZSS). Forestry Commission Scotland (FCS) would later join this steering group as would the Wild Media Foundation (WMF) although the WMF's direct involvement was temporary and concluded prior to the official launch of the Project.

In order to identify a way forward for a Cairngorms-based wildcat conservation project, it was decided to hold a conference. The conference, entitled "Practical wildcat conservation in the Cairngorms National Park" was held in Aviemore in April 2008. This event was well attended by around 100 delegates from a wide variety of sectors and, through several workshops, served to identify options for progressing a conservation project, as well as helping to raise awareness of wildcats and their plight, both locally through discussions amongst those in attendance, and nationally by way of resultant press coverage.

The steering group of partner organisations designed a Project which would be funded largely by SNH's Species Action Framework, but also with significant funding contributions from CNPA and RZSS. The CNPA's ecologist, David Hetherington, previously organiser and chair of the Steering Group since its inception, was employed as full-time Project Manager in February 2009. The Project's aims are to:

- To secure the future of the Scottish wildcat within the Cairngorms National Park (CNP), leading to further action across a wider area of Scotland
- To raise awareness of the plight of the Scottish wildcat

The Cairngorms Wildcat Project was officially launched by Environment Minister Roseanna Cunningham at the Highland Wildlife Park on May 5th 2009.



I. Raising awareness of wildcats and their conservation

In order to communicate effectively the many, sometimes complex, messages about wildcat conservation to the wider public, it was felt that a strong awareness-raising brand was required. 'Highland Tiger' was chosen in order to inspire people, alert them to the wildcat's endangered status, and make them aware of how they could help save the Scottish wildcat.

Project web presence

The Project website, www.highlandtiger.com, was designed to be the public focal point for up-to-date information about wildcats and their ecology, which would also detail the objectives and activities of the Project in a visually attractive, user-friendly way. A news section and blog regularly update visitors on Project developments, while the public are encouraged to contribute to wildcat conservation by reporting wildcat sightings via an online form. There is also an opportunity to donate money to a wildcat conservation fund administered by the RZSS, the proceeds of which are used to further wildcat conservation and research in the Cairngorms National Park. The average monthly figure for the number of visits to the Project website, over the past year is just under 13,000. This figure is slightly down on the previous year, when the average monthly figure from May 09 to May 10 was over 13800. However, April 2010 had seen a very large volume of visitors (almost 70,000) because of a prominent story about the Project on the BBC News site. Excepting April, then the average monthly figure for that year would have been just over 9000. The year June 2010 to May 2011 therefore largely represents a year of consolidation on visitor numbers to the website, which have remained fairly constant over the course of the year. The total visits for each month in the year from June 2010 to May 2011 are as follows:

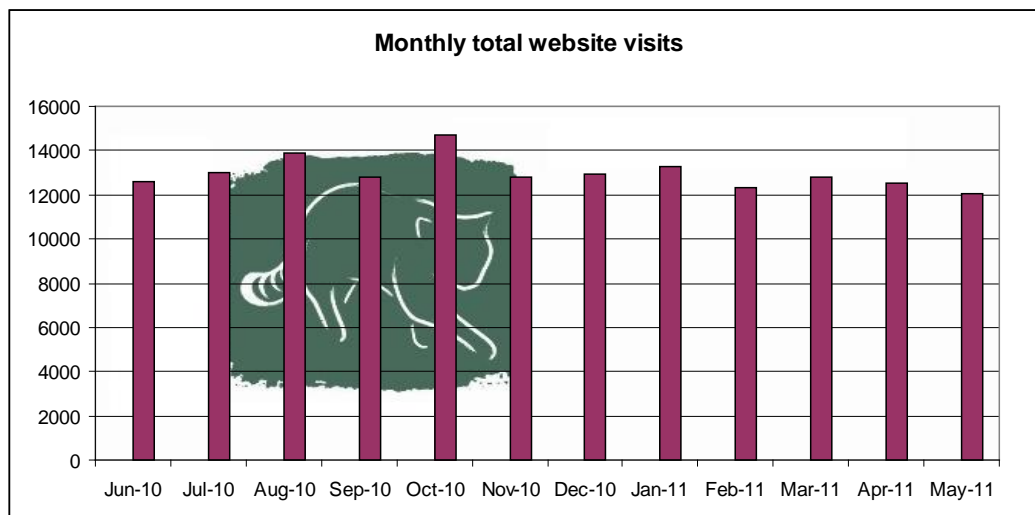


Fig. 1. Web traffic visiting *highlandtiger.com* from June 2010 – May 2011

The Highland Tiger Facebook page was created in May 2009 with the aim of quickly delivering specific conservation messages, such as advertising an event or making a plea for assistance, to a community of interested individuals. At the time of last year's annual report, the Facebook page had 1404 followers. Over the past year the number of followers has grown considerably to 2560. The page continues to be managed by staff from the RZSS' Education Department.

A Highland Tiger Youtube channel, www.youtube.com/user/HighlandTigers, was created in October 2010 and is administered by RZSS staff. To date the channel has uploaded 7 different videos, including the Project's introductory DVD material, a BBC Landward feature on the Project, as well as footage of the wildcats at the Highland Wildlife Park. To date the Project's introductory video, which explains the plight of the wildcat and how people can help, has been viewed over a thousand times. As staff become more familiar with maximising the effectiveness of Youtube, it is hoped that viewing figures will increase substantially.

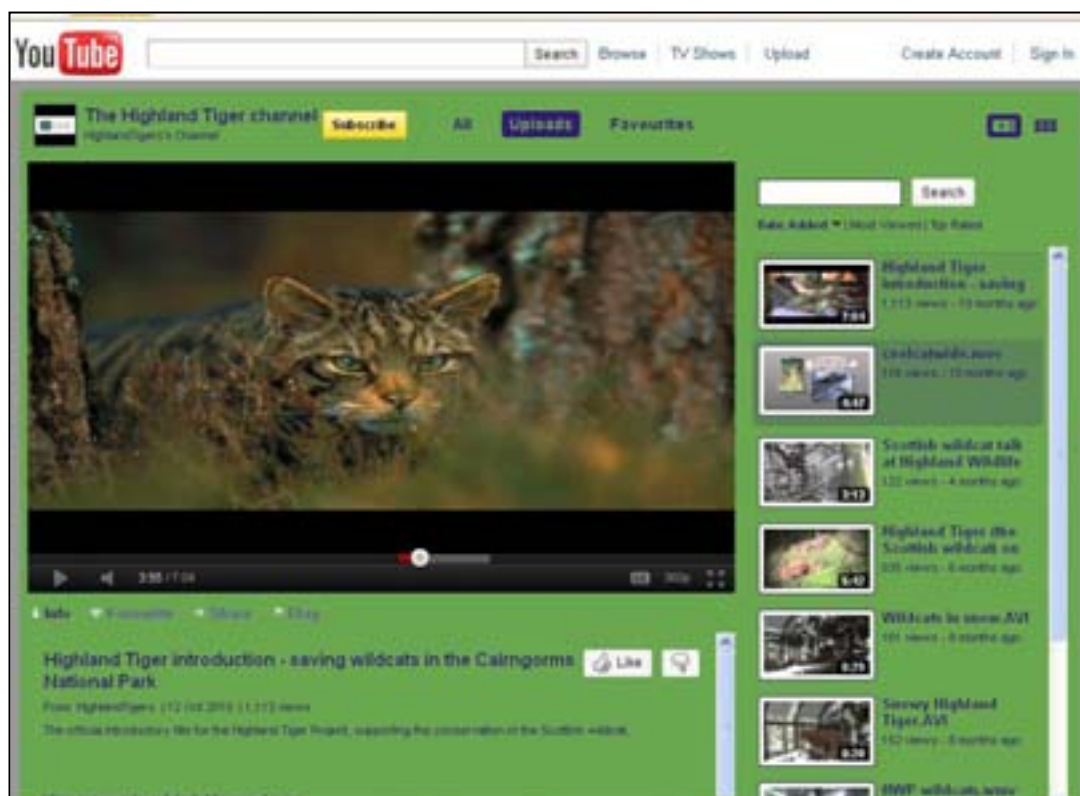


Fig 2. A screenshot from the Highland Tiger YouTube channel

Talks

The Project Manager has responded to invitations to speak about the Project at society meetings across and around the National Park. Priority is given to groups based on audience composition, audience size, and geographical location. This year the Project Manager delivered 14 presentations, with a total audience size amounting to around 600. This included several local audiences with a general interest in wildlife, as well as more specific audiences comprised of local farmers, national park rangers, mountain guides, or schoolchildren. The national park rangers are now all aware of the Project and distribute Project materials, such as postcards, leaflets and DVDs, to a wide public audience. Some also assist with camera trapping around the National Park. Any donations or speaker's fees are passed to the Highland Tiger fund administered by the RZSS.

Media coverage and articles

Once again the project enjoyed positive and widespread coverage in all media – print, broadcast and web - locally, nationally and globally. Press interest is stimulated

from within the media such that no press releases required to be done by the Project over the past year. In line with the Project's Communications Strategy, there was media coverage of the Project in every 3-month period of the year.

Coverage in the broadcast media included features across the UK on the BBC's Countryfile, Autumnwatch, and Newsround programmes and in Scotland on their Landward and Out of Doors programmes.

The Project stimulated front cover stories in three magazines: BBC Wildlife; Mammal News; and Scottish Gamekeeper. The BBC Wildlife magazine carried a six-page feature focusing on the Project, while a double page spread was carried by the Mammal Society's 'Mammal News'. A double-page spread in the SGA's membership magazine saw a front cover with the very positive title 'Highland Tiger: keepers' key role in conservation'. A one-page article appeared in the October edition of National Geographic magazine resulting in worldwide coverage in different languages reaching an estimated 40 million readers. SNH produced a six-page article for the Winter 2010 edition of their magazine, 'The Nature of Scotland', while articles also appeared in the national press in the Scotsman, Daily Mail and People newspapers. More locally to the Cairngorms National Park, the Project was covered in the Donside Piper while articles written by the Project Manager about the need for the intensification and expansion of feral cat neutering appeared in 'The Nethy' and two Cats Protection branch newsletters.



Public events



In summer 2010, the Project had a staffed presence at stands at both the Scone Game Fair and the Highland Field Sports Fair at Moy. At Scone the Project stand was located within the marquee of the event organisers, the Game & Wildlife Conservation Trust, while at Moy the Project was hosted within the marquee of the Scottish Gamekeepers Association. This ensured good engagement with those living and working in rural Scotland, especially gamekeepers. Taxidermic specimens of a wildcat and tabby domestic, on loan from

Inverness Museum and the National Museums of Scotland, were also very useful at attracting people over to the stand, and also for illustrating the differences in coat markings between the two types of cat. Furthermore, a range of Project materials was provided to visitors, including wildcat ID cards.

The CNPA organised two educational events in Aviemore and Balmoral in May and June, entitled 'Celebrating Nature'. These had a woodland theme and were aimed largely at schoolchildren. RZSS staff were in attendance to talk about wildcats and their conservation.

An event was organised by Maureen Laverman, a Cats Protection volunteer in Donside, to raise funds for and awareness of wildcat conservation. The 'Highland Tiger Fling' took place in Tullynessle in September and attracted over a hundred local people to a social evening where Project staff were on hand to talk about wildcats. The event raised £1200 for the Highland Tiger fund.

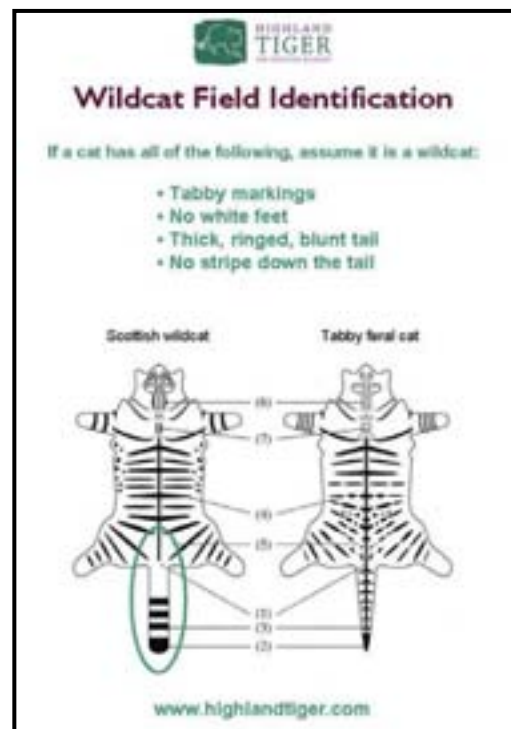
2. Working with estates

The Project works closely with five estates spread across the Cairngorms National Park to trial new methods of wildcat monitoring and promote wildcat-friendly predator control. The Project Manager regularly meets with estate staff for updates on cat activity on the estate.

Precautionary approach to feral cat control

Gamekeeping staff from each of the five estates have received training in wildcat identification and have been given pocket-sized laminated ID cards, which they can carry with them in the field (see right). The diagram is based on research conducted at the National Museum of Scotland but has been simplified to ensure that it is both field-practical and precautionary. The Project's working definition of a wildcat largely focuses attention on the animal's tail shape and markings. The tail is considered to be a feature readily noticed in the field. Relaxing the strict definition in this way is likely to reduce the margin for error in the field and probably also conserves better quality hybrids, which are likely to possess a great deal of valuable wildcat genetic material.

When engaged in their routine feral cat control work, gamekeepers are encouraged not to shoot if there is any doubt about a cat's identity. Wherever possible, gamekeepers are encouraged to use live cage traps for feral cat control, rather than rely solely on night-time shooting, with the aim of considerably reducing the risk of wildcats being accidentally shot. Wildcats caught in cage traps, following inspection of coat markings, can be released unharmed. The Project's protocol encourages the estate to re-home via the Cats Protection any errant pets caught in cage traps, while feral cats are neutered via the Cats Protection or humanely dispatched by estate staff. To date, we have had no reports of wildcats being shot on any of the participating estates. Furthermore, no wildcats have yet been caught in estate cage traps.



Camera trapping



The Project's field researcher, Roo Campbell, has been carrying out intensive camera trapping on the participating estates in order to assess the status of their wildcat populations. Roo has 80 Cuddeback Capture camera traps at his disposal and deploys them using a methodology developed by Kerry Kilshaw of WildCru. Forty camera traps are

deployed on each estate for at least 2 months. Each estate has two cameras set up at 20 locations which are located about 1km apart on a grid pattern. The cameras are paired up in order to obtain a photographic record of the coat markings of both sides of any cats. A variety of different lure methods have been trialled and a mixture of food bait (much of it provided by local estates) and bobcat lure has been judged to be the most successful at bringing wild-living cats within range of the cameras. Each of the estates has now been subject to intensive camera trapping, but will be re-trapped over the course of 2011/12. The results of intensive camera trapping to date are summarised in Table 1.

Estate	Wildcats	Hybrids	Domestic cats
A	1	0	1
B	0	4	2+
C	0	0	2
D	0	0	3
E	4	1	1

Table 1. Number of different cats photographed during intensive camera trapping on participating estates in 2010/11.

Estate A has also twice been intensively camera trapped by Kerry Kilshaw of WildCRu, but using a slightly different methodology. Results from the winter of 2009/10 gave a large number of cats: 4 wildcats, 9 hybrids and 0 domestics. Retrapping of the same sites during the 2010/11 winter, however, resulted in only 1 wildcat, 1 hybrid and 1 domestic cat. There was a change in baiting method between the two trapping periods with pheasant carcasses replaced by pheasant wings in the second winter, and this may have had an impact on the number of cats photographed. However, a large reduction in the local rabbit population over the intervening year was reported, and this may be responsible for a reduction of wild-living cat density on the estate.



Fig 3. Photo of a wildcat taken during intensive camera-trapping of Estate E.

Outside of the intensive camera trapping periods, estate staff have assisted with opportunistic camera trapping, i.e. the use of one or two camera traps to monitor areas of the estate which appear to be suitable for wildcats or have had recent observations. This has involved them setting up cameras, supplying bait, checking batteries, and downloading photos. This type of monitoring resulted in photographs of: one wildcat on Estate A; two domestic cats on Estate C; one domestic cat on Estate D; and one wildcat, one hybrid and three domestics on Estate E.



Fig. 4. Photo of a wildcat taken on a camera trap set up by a gamekeeper on Estate E.

Other estate staff involvement

Gamekeepers from all estates have been reporting sightings to the Project Manager of cats matching the Project's definition of a wildcat. Over the past year, Estate A reported one sighting of a potential wildcat; Estate B reported two sightings of a potential wildcat hanging around estate buildings looking for food during harsh winter weather; Estate C staff reported no potential wildcats; Estate D reported a probable hybrid; and Estate E staff reported no potential wildcats. However, staff have also been reporting sightings of feral cats and have suggested potential source populations. This has allowed the Project Manager to notify local Cats Protection volunteers of locations where trapping and neutering could take place (see managing domestic cats section for further detail). Several of the estates have been communicating to their tenants the need for responsible cat ownership, especially the need for neutering.

3. Managing domestic cats

Early on in the Project, a dialogue developed with Cats Protection (CP), the UK's largest cat welfare organisation, with the aim of intensifying and expanding the neutering of pet and feral cats across the Cairngorms National Park. CP is largely dependent on a network of local volunteer branches which are coordinated by paid staff and part of their remit is the trapping, neutering and return (TNR) of feral cats. Following productive discussions, CP expressed an interest in employing a volunteer coordinator whose job it would be to ensure that all CP volunteers in and around the Cairngorms National Park were trained in wildcat identification, were aware of wildcat conservation issues, and operated in a coordinated, strategic manner across the region, especially with regard to feral cat TNR. They would also recruit and train new volunteers. The Project had agreed to contribute one third of the annual costs of employing that CP staff member and it was hoped that the coordinator would be in place by the end of summer 2010. However, as a result of the unfavourable economic climate, CP ultimately decided they could not afford to employ an extra staff member. It was agreed that the coordination of volunteer branches in the Cairngorms region should be carried out with existing human resources.

From discussions with vets from seven practices across the National Park, as well as with CP, it was felt that the majority of unneutered and unvaccinated cats in the National Park are likely to be farm cats. Consequently, CP ran a free, farm cat neutering scheme for farmers in the Cairngorms National Park in August 2010, which was



advertised in the local press and launched at the Black Isle Show. Take-up, however, was low with only three Strathspey-based farmers applying. In October, the Project Manager gave a presentation to 50 farmers at the Cairngorms Farmers' Forum about the need for farm cat neutering to protect the Scottish wildcat. The audience was made aware of the CP's TNR service and that the costs of neutering could be covered by CP while funds allowed. However, the CP's annual feral cat neutering figures largely show a low rate of neutering in most branches for 2010, with no clear increasing pattern from the figures for 2009 (Table 2 and Fig. 6). The positives were a consistently high rate of neutering in the Forfar branch and a steep increase in Deeside, where a new volunteer branch had been created in April 2010 following discussions between CP and the Project.

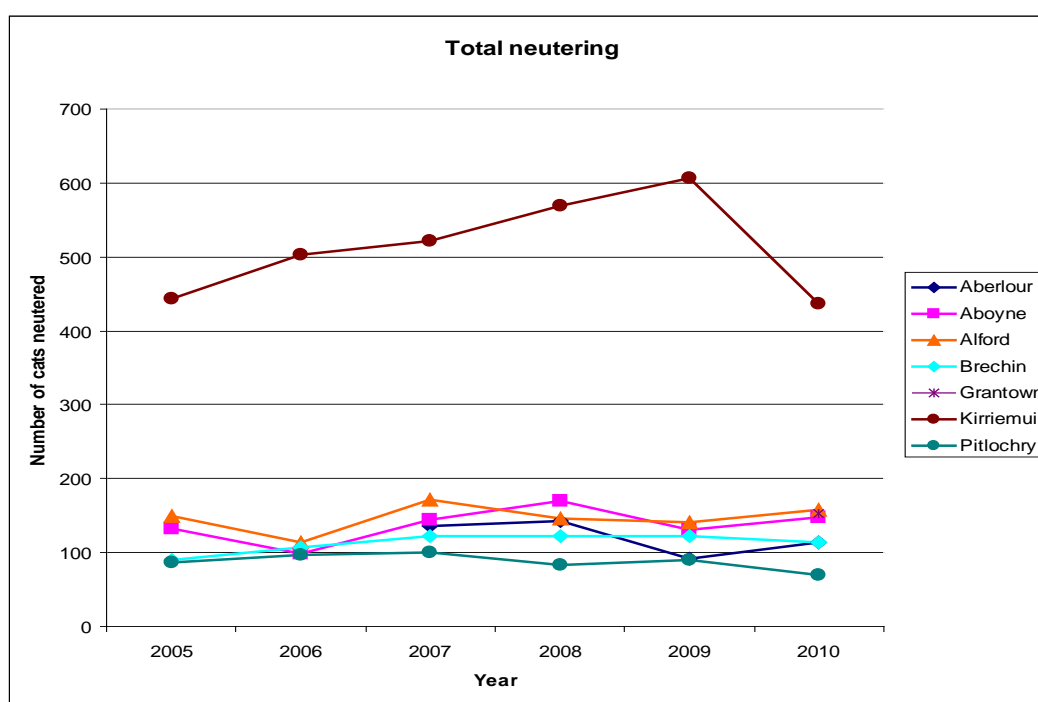


Fig 5. Total number of cats neutered at the seven Cairngorms veterinary practices 2005-2010

Branch	CP-funded feral neuterings		
	2009	2010	Total
Deeside	0	23	23
Forfar & District	195	152	347
Huntly & Keith	48	6	54
Inverurie & Alford	39	36	75
Montrose & Brechin	24	12	36
Moray	12	6	18
Perthshire	40	61	101
Strathspey	6	3	9
Total	364	299	663

Table 2. Number of feral cat neuterings funded by the eight Cairngorms Cats Protection branches in 2009 and 2010

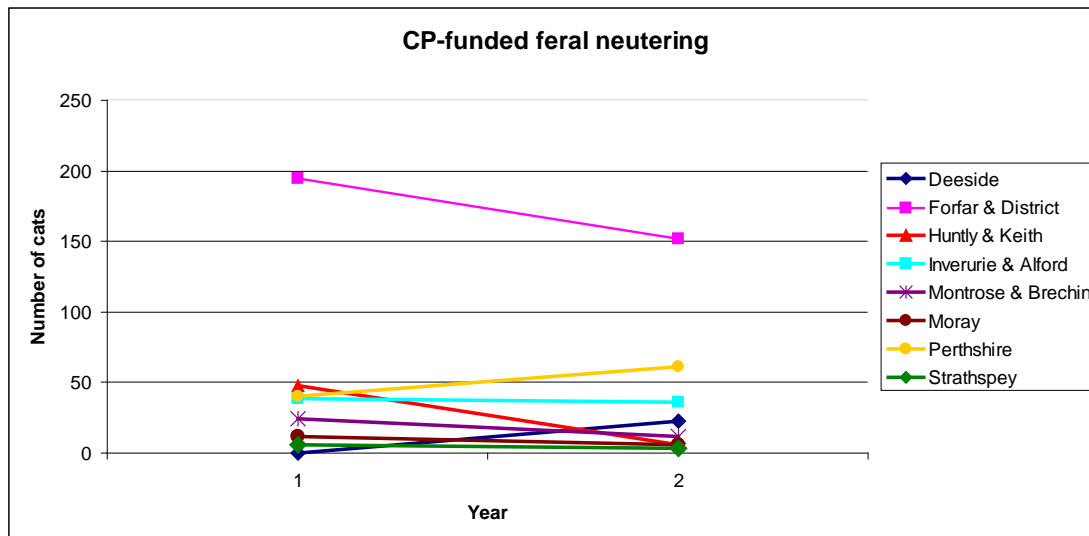


Fig 6. Number of feral cat neuterings funded by the eight Cairngorms Cats Protection branches in 2009 and 2010.

Volunteer training and involvement

In light of the limited human resources available for TNR in most areas, as well as the muted response of the public to TNR services offered by CP, it was decided that a more proactive approach to TNR, involving more volunteers, should be tested.

Via alerts on the Highland Tiger blog, Facebook page and via a series of e-mails, the Project Manager put out a call for more prospective Cats Protection volunteers to get involved with TNR to benefit wildcat conservation in and around the Cairngorms National Park. The response was good with over 20 new volunteers recruited from across and around the National Park, most of whom are attracted by the wildcat conservation angle. Two CP training days took place in October in Stonehaven and Aviemore for newly recruited as well as pre-existing volunteers from the CP branches covering the National Park. As well as presentations from CP staff, the Project Manager gave presentations which aimed to ensure a strong understanding of wildcat conservation issues and ID, as well as identification of targeted areas for TNR, i.e. regions around the five estates.

The nine new volunteers recruited for the Strathspey branch have effectively become the branch's new TNR team and have received new trapping equipment. Each volunteer has been assigned a geographical area and is encouraged to follow up any tip-offs and to contact householders and land managers in rural areas proactively about any unneutered cats in the area. It is hoped that a 'sweep' approach to TNR across an area should result in increased feral neutering in Strathspey in the future.

CP has decided that several potential volunteers from the Tomintoul & Glenlivet area, who expressed an interest in becoming involved in TNR, will form a separate TNR branch for the area. TNR training is planned for September. The new branch will be separate from the existing Moray branch which is largely based around lowland towns some distance away to the north.



Responsible cat ownership leaflet

The Project has produced a leaflet promoting the need for responsible cat ownership in the National Park. Entitled “Cats in the Countryside” and endorsed by all local veterinary practices and TV vet Joe Inglis, the leaflet outlines the reasons why neutering domestic cats is important for both cat welfare and wildcat conservation. It provides contact details of local vets and explains both CP’s voucher scheme, where financial help is available to meet the costs of neutering pet cats, as well as their TNR service. The leaflet has been made widely available to vets, CP volunteers, and National Park rangers, as well as at various local events, visitor centres and local shops and supermarkets selling cat food.

4. Researching and monitoring wildcats

Records of sightings and roadkill carcasses are very useful sources of data about the potential distribution of wildcats in and around the Cairngorms National Park. The importance of reporting sightings to the Project is stressed during talks and at events, as is the reporting and collection of roadkill carcasses. Since its launch, the Project has been collating records of potential wildcats and hybrids from across the National Park and beyond. Typically the records are a mixture of unsubstantiated sightings, sightings with photos, camera trap images, and carcasses. Members of the public can and do report sightings via a form on www.highlandtiger.com, while there is also a considerable amount of word of mouth contact via associates of the Project. Often the Project will receive a flurry of records after media coverage, especially a newspaper or magazine article which encourages readers to report sightings via the website. Records are also often forthcoming from visitors at public events such as countryside fairs. Surprisingly, many records to date have been accompanied by photographs or video footage taken by observers on their digital cameras or mobile phones, and this is very useful for substantiating sightings. To date over 200 records have been submitted from the Cairngorms National Park area, with a further 130 from other parts of Scotland.

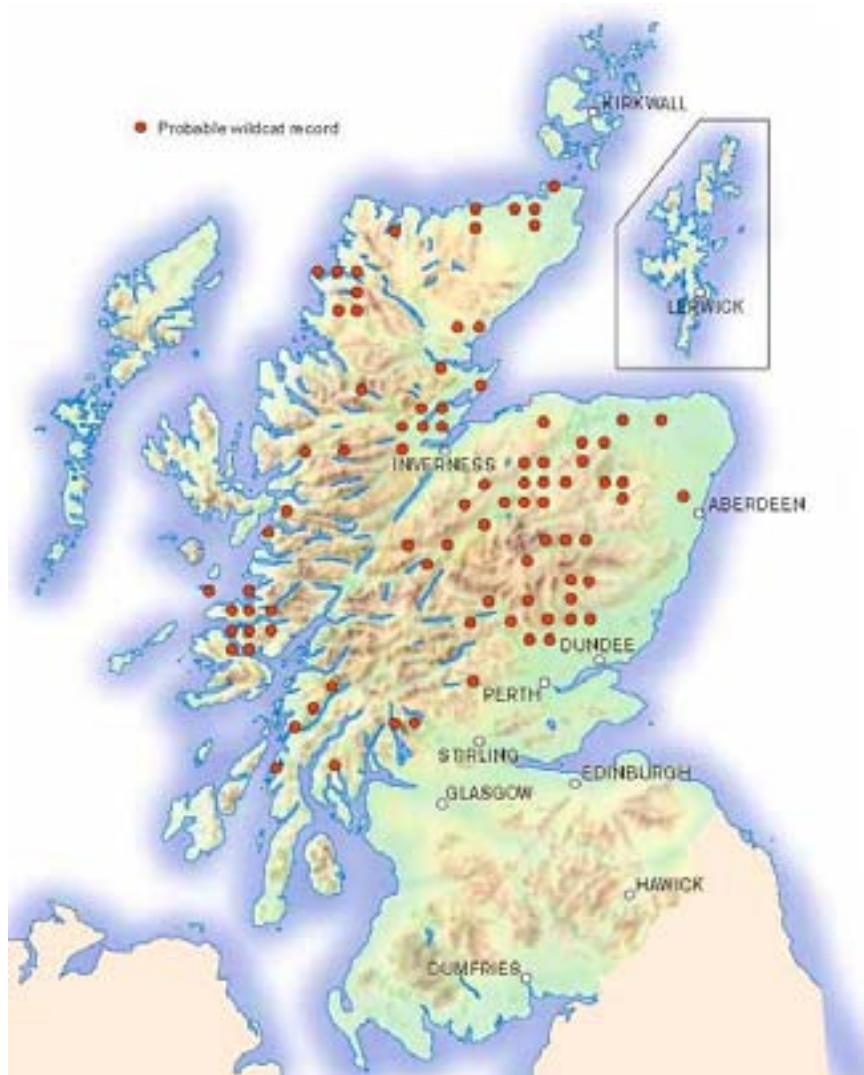


Fig. 7. Probable wildcat records from the SNH Wildcat Survey 2006-08. Reproduced with permission of SNH, produced by Ashworth Maps Interpretation Ltd.

Given the variability in quality between records, a categorisation system has been devised which takes into account both the verifiability of the record, as well as the likely type of cat. So each record is assigned a letter A or B, based on whether the record can be substantiated with other evidence, (e.g. a carcase or photograph would result in an A), or whether it is unsubstantiated (B). The record then receives a number 1, 2, or 3 based on whether the coat markings correspond with a probable wildcat (1); a probable hybrid (2); or a possible wildcat (3). Records where there is insufficient detail to ascertain from coat markings whether a tabby-marked cat is a wildcat or not are awarded a 3. So for example, a camera trap photo depicting a stripy cat but where the tail was not visible would be ascribed a category of A3. Records are logged on a Geographic Information System (GIS) and will be passed to the North East Scotland Biological Records Centre (NESBReC). Added to records collated during the SNH Wildcat Survey 2006-08 (see Fig. 6), this could provide a useful resource for helping evaluate the distribution of the Scottish wildcat and the extent of hybridisation.

Carcases

Carcases can provide much-needed information on hybridisation, diet, disease etc. and the public are encouraged to report carcasses to the Project and where possible transport them to freezers at the Highland Wildlife Park, SNH office in Aviemore, or at the Glen Tanar estate near Aboyne. Staff from the National Museum of Scotland and WildCru were commissioned by SNH to analyse 17 cat carcasses from around the Highlands, the collation of most of which was coordinated by the Project. The Project takes a precautionary approach to carcasses and so any tabby-marked cats are collected for analysis. 14 of these came from the Cairngorms National Park, 2 were from Aberdeenshire and 1 was from NW Sutherland. On the basis of skull and/or pelage characteristics, the cats from Aberdeenshire and Sutherland were judged to be hybrids. Of the 14 from the Cairngorms, 3 were judged to be potential wildcats (all from Strathspey); 5 were hybrids (3 Strathspey; 1 Donside; 1 Perthshire); 5 were domestics (4 Strathspey, 1 Badenoch); and 1 was either a hybrid or domestic (Strathspey). Most of the cats submitted are roadkills so the carcasses may not be a representative sample of wild-living cats but instead could be biased towards those cats more likely to be found in lower-lying areas with roads. A further 28 carcasses collated by the Project await analysis for identification purposes.

Camera trapping

Aside from the intensive camera trapping practised on the five participating estates, the Project has also loaned out cameras to key individuals and organisations for smaller-scale opportunistic camera trapping around the National Park. This year cameras were deployed in areas of the Angus Glens, Deeside, Strathspey and Badenoch, and were looked after by local rangers and wildlife enthusiasts who are given best practice information developed during the intensive camera trapping sessions on the estates. As usual, the cameras captured an array of local wildlife, including the first confirmed pine marten record for Glen Clova. However, several wildcat photos were taken at different sites across Strathspey, thus adding to our understanding of wildcat distribution and behaviour. A growing number of organisations and individuals in the National Park now have their own camera traps and these are encouraged to submit any photos of potential wildcats to the Project.



Fig. 8. Photo taken in January on a Project camera trap set up by a member of the public at their remote house in Strathspey

Genetics

Partners at the RZSS, WildCru, National Museums of Scotland and University of Chester have been working together over the past year to develop the science of wildcat genetics. A test of cat mitochondrial DNA had been developed a few years ago and while undoubtedly a significant breakthrough, gave us a far from complete picture about a cat's genetic background. Mitochondrial DNA is inherited through the mother's side only, and so a test result showing wildcat ancestry could still nevertheless mean that the animal is a hybrid, as it tells us nothing about the father's side. New research has now developed a test which can also examine both the x and y chromosomes, provided the sex of the cat is known. All three genetic tests taken together means that a much more complete picture of a cat's genetic background can be built. Positive results for all three tests would suggest that there is a strong likelihood that the animal in question is a wildcat. This has obvious applications for testing the purity of captive wildcats listed on the stud book, but also for testing roadkill carcasses or cat's temporarily caught under licence prior to their release. It is anticipated that a protocol for testing mitochondrial DNA of cat faeces will be developed over the coming year, which could have a useful application in field surveys. In addition a more comprehensive assessment of the wildcat nuclear genome is currently underway utilising over 50,000 genetic markers which will hopefully shed more light on pure and hybrid issues.



Fig. 9. A young, anaesthetised wildcat at the Highland Wildlife Park having blood taken for genetic analysis.

Plans for Year 3

Over the course of the third and final year of the Project, we'll continue to communicate the need for responsible cat ownership and wildcat friendly predator control. Intensive camera trapping will continue in order that we can compare sites over different years to gain an idea of how cat populations respond to changes in the natural and human environments. As the Project is scheduled to end in April 2012, we will also focus on identifying a legacy for wildcat conservation which can be sustained beyond the life of the Project. The experiences and findings of the Project will be presented and discussed at a closing conference in Spring 2012 before a final report is written and distributed.

How you can help

- Report sightings of potential wildcats to the Cairngorms Wildcat Project via www.highlandtiger.com/help_report.asp or by contacting David Hetherington on the details below.
- If you find a roadkill carcase of a stripy cat please take it to a freezer immediately (there are freezer facilities at the Highland Wildlife Park, Kincaig; the SNH office at Aviemore; and the Glen Tanar Estate near Aboyne) or contact David Hetherington on the details below.
- We would also be very interested to hear about any unneutered domestic cats, particularly colonies of ferals. We will then pass the information on to local Cats Protection volunteers who can organise for the cats to be neutered.
- Of course, if you are a cat owner you can help by making sure your pets are neutered and vaccinated so that they can't interbreed with, or pass on any diseases to, our endangered wildcats.
- The Royal Zoological Society of Scotland manages a Highland Tiger fund, the proceeds of which are used to support wildcat conservation work throughout the Cairngorms National Park. If you would like to contribute by adopting a wildcat, or by donating, please visit: www.highlandtiger.com/help_adopt.asp.

Contact

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Acknowledgements

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Image credits: Front cover – Laurie Campbell; P4 – Jasper Hughes; P5 – source: Kitchener, A.C., Yamaguchi, N., Ward, J.M. and Macdonald, D.W. (2005). A diagnosis for the Scottish wildcat: a tool for conservation action for a critically-endangered felid. *Animal Conservation* 8: 223-237; P6 – Lorne Gill, SNH; P8 – Elspeth Stirling; P11 – Lorne Gill, SNH; P14 – David Hetherington.